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SYNOPSIS

THE AMERICAN AND FOREIGN LITERATURE OF MEDICINE, SURGERY AND COLLATERAL SCIENCES.

EDITED BY

D. G. BRINTON, M. D.,

AND

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MAY 22 1888

I. ANATOMY, PHYSIOLOGY AND PATHOLOGY.

Arterial Anomaly.

There was recently in a subject in a dissecting-room of the Ledwich School of Medicine, Dublin, an example of a comparatively rare anomaly. The right subclavian artery came off from the arch of the aorta, and the right common carotid also took its origin from the arch. Practically there was no arteria innominata. The two carotids at their origin were barely separated. Excluding the coronary arteries, there were four branches from the arch of the aorta.

Incomplete Pericardial Sac: Escape of Heart into Left Pleural Cavity.

Before the Islington (England) Medical Society, Dr. BOXALL showed the chest organs of a woman who died with symptoms simulating pulmonary thrombosis on the third day after the birth of her third child. The necropsy, however, showed that a very peculiar accident had occurred. The pericardium on the left side was represented only by a sickle-shaped fold attached to a diaphragm and forming a pocket three-quarters of an inch deep. The heart was found lying in immediate contact with the lung, its apex being situated nearly three inches to the left of this pouch, from which it had evidently escaped during a severe attack of vomiting on the second day after delivery. This accident was followed by dyspnœa and collapse, in which the patient died thirty hours later.

Malformation of the Œsophagus.

An interesting and curious arrest of development and alteration in the anatomy of the œsophagus is described by M. BOISVERT in the *Journal de Médecine de Bordeaux*, No. 13. The upper part of the œsophagus started from the pharynx in the customary manner, but was narrower than usual, and terminated in a cul-de-sac, somewhat dilated, behind the situation of the bifurcation of the trachea. The lower part of the gullet commenced at the bifurcation of the trachea as a tube, continuing the direction of the trachea, and after a short course of three centimetres terminated in the stomach. When milk was taken, it was received into the cul-de-sac and ejected therefrom partly into the trachea, whence it found its way into the second part of the œsophagus. It is needless to say that with each ingestion of food attacks of asphyxia from the first nearly took the life of the infant, but did not end fatally until nine days had elapsed. The epithelium which lined the two parts of the œsophagus was of the stratified variety.

The Bacilli of Rhinoscleroma.

At a meeting of the Imperial Society of Physicians of Vienna on October 20th, DR. PALTAUF demonstrated preparations and cultures of the bacilli of rhinoscle-

roma, which he has made in conjunction with Dr. V. Eiselsberg (*Münch. Med. Woch.*, Oct. 26th). These bacilli discovered by v. Frisch are short thick rods, which were found by Cornil and Alvarez to possess a characteristic capsule. They are best demonstrated by staining the fluid expressed from the new growth with gentian-violet, or with an after stain with iodine and safranin, when they appear as oval cocci, or as short rods twice as long as broad, generally encapsuled. In sections they are well seen by staining first with gentian-violet, and then rapidly immersing in clear oil. The capsules may be brought into view by staining with carbol-fuchsin and washing in acetic acid, or by thymol-gentian violet and acetic acid, or by aniline-water-safranin. These bacilli may be well cultivated in gelatine, agar, and potato. They form beautiful needle-like cultures similar to those of the pneumococcus—a similarity so great as to render them indistinguishable. Animals cannot be inoculated with the disease. In a mouse inoculation of the bacilli excited the formation of an abscess in which non-encapsuled bacilli were found. After inoculation into the pleura, animals die in from twenty-five to twenty-eight days, and in the exudation and swollen spleen numerous diplococci or short rods indistinguishable from pneumococci were found. After subcutaneous inoculations in fatal cases numerous encapsuled cocci were found in the blood, spleen, and at the site of inoculation. Animals surviving inoculation were susceptible to further inoculation. By a comparison with the pneumococcus, it was found that animals infected with the latter died in two days, those infected with the bacilli of rhinoscleroma died in five days or survived. Out of six guinea-pigs that were inoculated two died, one exhibiting an interstitial pneumonia with numerous bacilli, the other dying with acute pleurisy and pericarditis—associated with encapsuled cocci. Rabbits are insusceptible—another analogy of this microbe with Friedländer's pneumococcus,—so that the only difference established between the two kinds is that the one is less virulent than the other.

Relationship Between Hyaline and Amyloid Degeneration.

Dr. STILLING, of Strasburg, has demonstrated (Virchow's *Archiv.*, vol. i., p. 103) that hyaline degeneration may merge into that of amyloid degeneration. His observations were made chiefly on the spleen, as the organ which earliest undergoes waxy changes, the object being to show that in recent cases of amyloid degeneration areas of hyaline change are also present. In a case of phthisis, of which full details are given, this combination was well marked, and the hyaline product mixed with amyloid was also found in other cases of acute and chronic disease, though always of the same class, viz., chronic inflammation of bone and joints, and in tuberculous disease of the lungs; the hyaline change being more predominant than the amyloid in cases of short duration. In one case the spleen appeared to be amyloid throughout, but on applying the characteristic tests it was proved to be altogether hyaline. It is interesting, in relation to these observations, to remember that so long ago as 1879 this connection between hyaline and amyloid degeneration was pointed out by Dr. Stephen Mackenzie and Dr. Ralfe in the debate of that year at the Pathological Society on lardaceous disease. Dr. Mackenzie, speaking with reference to the influence of fever in producing lardaceous disease, called attention to the changes in blood-vessels that

occurred in certain diseases with blood alterations—a change which consisted of a hyaline transformation, which did not give a characteristic reaction with iodine, but stained slightly with methylaniline violet. Dr. Mackenzie did not regard this hyaline material as lardaceous, but, as it occurred in diseases attended by alterations in the blood and most of them febrile in character, he thought an investigation into the nature of the hyaline change might throw some light upon the origin of lardaceous disease. Dr. Ralfe, speaking with reference to the same subject, thought the difference between hyaline and waxy degeneration was one only of degree, the hyaline being the first step in the degenerative process. He has further stated that a microscopic examination of the hyaline substance shows at first that it consists of granules of an albuminous character, which are insoluble in ether; but at a more advanced stage these granules become distinctly fatty and soluble in ether. From this he argues that the hyaline changes are the first step in a process which, if acute, leads to fatty degeneration; if chronic, to lardaceous degeneration. Though the extensive and elaborate researches by Stillman have now established the fact of the connection between hyaline and lardaceous degeneration, it must not be forgotten that the suggestion first came from England.

Hyoidal Cysts.

To the Pathological Society of London (*Lancet*, Nov. 6), Mr. J. BLAND SUTTON described cases of cysts in the neighborhood of the hyoid bone. The first patient was a man who presented a tumor the size of a large walnut, occupying the floor of the mouth, bulging forward in the middle line. During the nine years he had noticed it, he had submitted to seven operations. An anæsthetic was administered, and it was ascertained the cyst lay between the two genio-hyo-glossi muscles, and was so firmly attached to the hyoid bone as to need a raspatory to detach it. It was full of sebaceous matter, and contained a few hairs. The walls were composed of dense tissue, lined with squamous epithelium and dotted with sebaceous glands. The second patient was a woman, aged twenty-seven; the cyst in her case also was dermoid, and contained sebaceous material. Mr. Butlin, in his work on the tongue, inferred that these cysts were very rare. He spoke of about twenty recorded cases, but it is not difficult to find three times this number, for the cases described as sebaceous cysts of the tongue were really of the same nature as dermoids. Sebaceous cysts arising in the tongue, like those occurring beneath the deep cervical fascia, differed from those arising as a result of obstruction to the duct of a sebaceous gland. In branchial fissures incompletely obliterated, and in a persisent lingual duct, cavities lined with epithelium beset with sebaceous glands, which poured their secretion into the duct or persistent branchial space, existed. That many of the so-called ranulæ arose from the lingual duct, and persistent portions of branchial fistulæ, was beyond doubt. The lingual and thyroid ducts might be detected in 10 per cent. of all bodies examined, and the thyroid duct in 15 per cent. Streckeisen found the latter duct and accessory thyroid cysts in about 25 per cent., but this might be accounted for by the fact that he obtained his material from a goitrous district. Mr. Sutton was induced, in part, to follow up the investigation, because Dr. Norman Moore stated before the Society that accessory thyroids were very rare. Many cystic tumors described as arising in the thyroid body really originated in accessory thyroid

bodies and detached portions of the thyroid duct, and every transition might be traced from cysts lined with epithelium and filled with mucus to others containing papillary contents, of which a very beautiful example was exhibited last session by Mr. Bilton Pollard. The most aberrant examples, and at the same time the most malignant forms, were such cysts as Mr. Treves exhibited before the last meeting. Cysts in the neighborhood of the hyoid bone might be compared with cysts found in the ovary and its neighborhood.

1. Cysts lined with epithelium, and filled with clear or mucoid fluid.
2. Cysts with papillary or villous processes projecting into their interiors.
3. Cysts with malignant carcinomatous growths sprouting from the walls.
4. Dermoid tumors.

Mr. H. T. Butlin could not concur entirely in the views expressed. There were cysts situated between the mylo-hyoid and the genio-hyo-glossus muscles, and nowhere near the middle line.

II. PHYSICS, BOTANY, CHEMISTRY AND TOXICOLOGY.

A Case of Recovery from Chloroform Poisoning.

In the *Brit. Med. Jour.*, July, 1886, Mr. WILLIAM MARTIN reports the case of a young man, aged 26, who was found by his father, late at night, in what was considered a fit. When seen by the author, his breath smelt very strongly of chloroform, and the father stated that there was some methylated chloroform in the house, and on looking for the bottle it was found that some had been lately used. Dr. Dale insisted on using the stomach-pump. A pint of water was thus introduced, which the patient soon vomited. As he was unable to swallow, some strong coffee was then pumped into the stomach, and galvanism applied, with no apparent effect. The breathing would remain stertorous for half an hour; for the next half hour the patient would breathe as if in a deep sleep; then the stertorous breathing would come on again, and so alternately for about twelve hours. After this, mustard poultices were applied to the nape of the neck and calves of the legs; slight twitchings of the facial muscles were observed, and the patient was able to swallow a little brandy and water. Next, he responded to a pinch on the arm. Soon he was able to move his arms and legs, and began to mumble. He gradually regained consciousness, but suffered from sickness and pain in the stomach for three or four days afterwards.

Poisoning by Preparations of Silver.

Dr. KRISSINSKY had an opportunity of examining the organs in three cases of poisoning by silver in man, and afterwards carried out certain experiments on animals. He arrived at the following conclusions:

1. The black granulations met with in the tissues are an organic compound of silver, the nature of which is obscure.

2. The metal is first deposited in the coats of the blood-vessels, and is only found in the connective tissue later on.

3. The accumulation of the metal in the vessel walls leads to deeply-seated changes and degeneration.

4. In the liver the silver is deposited principally in the radicles of the portal vein, and in the intralobular veins, but it is also found in the capillary plexuses uniting the two systems.—(Huget).

5. The deposit of silver in the substance of the tissues has been observed in cases of poisoning lasting forty-eight hours, but it did not then show the characteristic dark color, and only acquires this when acted upon by sulphuretted hydrogen.

6. The most copious deposit takes place in the cells of the medulla of bones.

Catalepsy caused by Corrosive Sublimate Poisoning.

The patient, a young woman, 24 years of age, following a violent emotion, aborted at the third month of her pregnancy. Two days later she had a rigor, and the lochia (abundant at first) became scanty and fœtid. She was ordered irrigations containing $\frac{1}{3000}$ of corrosive sublimate. Instead of calling in the nurse to give the injection, the patient's sister took upon herself to inject into the rectum one-third of a litre of the solution, containing 17 centigrammes (about $2\frac{1}{2}$ grains) of the sublimate. In the course of a few minutes the patient was seized with an intense general tremulousness, more marked in the upper extremities; her voice became feeble, and consciousness dull. On the arrival of the doctor, who was immediately sent for, half an hour had elapsed since the injection had been administered. The patient's face was pale, and her skin cold and clammy. She was unconscious; pulse 130, small and feeble; respiration 56, shallow and irregular. The tremors had disappeared, but the tonus of the muscles was increased to such an extent that the limbs preserved the position in which they were placed for more than a minute. Attempts to induce the patient to swallow gave rise to attacks of dyspnœa. A solution of albumen was injected into the rectum, together with hypodermic injections of tincture of musk. The skin was rubbed with hot cloths and alcohol. Notwithstanding this treatment, the breathing became more and more embarrassed, and it was found necessary to resort to artificial respiration. The pulse became imperceptible, and the face cadaveric. Death appeared imminent; but as the heart still pulsated feebly, the treatment was persisted in for upwards of three hours. The patient then began to show signs of returning life, and she recovered consciousness an hour and a half later. She was convalescent in about four days. The patient had never shown any symptoms of hysteria, and everything pointed to the sublimate as the direct cause of the attack.

Fatal Result of Peroxide of Hydrogen Injections.

A Norwegian surgeon, Dr. Laache, has reported a case in which a fatal result followed an injection of peroxide of hydrogen into the pleural cavity. The patient was a man twenty-eight years of age, who had had a portion of the ninth and tenth ribs resected for empyema. The operation had been successful and the wound progressed favorably, and two months after the operation there remained only a fistula about an inch and a half long. In order to hasten the healing of this, hypodermic injections of a 3 per cent. solution of peroxide of hydrogen were resorted to, as this method of treatment had given very satisfactory results in two somewhat similar cases in which it had been tried. Six injections, each containing 0.8 cubic centimetre of the solution, were administered without any particular effect. At the seventh, however, the patient complained of pain and faintness, the pulse failed, the respiration became oppressed, clonic contractions occurred in the right arm, the head turned to the left, the jaws became tightly set, the face became cynaotic, and the patient died in ten minutes. The necropsy, which was not made till forty-eight hours after death, revealed nothing very striking. The heart was dilated, and contained liquid blood without air bubbles; some ecchymoses were found in the parts of the left lung which were adherent to the chest walls. In the fourth ventricle of the brain an ecchymosis

the size of a pin's head was seen. A number of air bubbles were present in the blood of the hepatic veins, and some were seen on cutting into the spleen and kidneys. The cause of death was therefore by no means clear. Dr. Laache suggests that it may have been the small extravasation in the fourth ventricle, or shock. Dr. Wulfsberg, who took part in the discussion on the case at the Christiania Medical Society, though it was probably due to the introduction of the drug into the circulation. He thought that the strength of the blood current might have carried the peroxide, if introduced into a vein, through the right heart and lungs almost unchanged, but that afterwards more oxygen might have been disengaged than the blood could absorb, and bubbles were thus produced, which may have been the immediate cause of death. Where animals have been subjected to injections of air into the veins, bubbles are not always found in the blood. In these cases Dr. Wulfsberg thinks that death has been due to paralysis of the heart, for when examinations have been made immediately after death bubbles have been found in the coronary arteries. As so long a time had elapsed before the necropsy in Dr. Laache's case, these might have been absorbed.

Belladonna Poisoning.

Dr. J. H. BRADSHAW thus writes in the *Med. News*: We not infrequently hear of very large doses of medicine being taken by mistake, and a toxic effect, naturally expected, failing to ensue. It is quite common to ascribe this fortunate failure of symptoms of poisoning to put in their appearance to the diminished strength of the drug taken. I have heard of a teaspoonful of tincture of aconite being taken by a small child, without giving any alarm to the family. The case I am about to report can hardly be classed as one in which dangerous symptoms failed to appear because of a poor preparation of drug used, as the one taken was the normal liquid of belladonna leaf (Parke, Davis & Co.).

A patient, a young lady to whom I had given a mixture containing belladonna for asthma with good results, came to my office, stating that her medicine had been lost, and that she desired a new prescription. This I gave her, and, as she was unable to have it filled at the drug-store that night, and was suffering from her complaint, I handed her about two drachms of the normal liquid of belladonna, telling her to take five drops in water before going to bed. As she had been accustomed to take her other medicine in teaspoonful doses, she disregarded the new directions, and, upon retiring, took an overflowing teaspoonful of the drug. The dose was taken at ten o'clock. Soon after eleven, the mother of the patient was awakened by the labored breathing of her daughter, and becoming instantly alarmed at her pallid appearance, summoned her physician. I arrived about two hours after the drug had been taken. There had been no vomiting, and when I reached the room the patient was standing in the middle of the bed, highly delirious, swaying from side to side, respiration difficult and sobbing, heart beating about 120 to the minute, and the radial pulse extremely feeble. A small rim of iris surrounding an extremely dilated pupil instantly gave the diagnosis. Although a sufficient period of time had elapsed since the dosage for most of its absorption, still my first efforts were made in causing emesis. Unfortunately, I had no access to apomorphine, and had to resort to such agents as mustard and yellow sulphate of mercury, by the mouth. After struggling with

the patient for a long time in vain attempts to make her swallow, efforts of this kind were abandoned, and a half grain of morphine was given hypodermatically.

I have struggled with the delirium of fevers, and with the delirium of tremorous drunkards, but I never before met a patient so violent as was this poor girl. I remained with her the remainder of the night, and repeated the morphine in quarter grain hypodermatic does; I do not now recall exactly how many, probably *half a dozen*. The morphine acted beneficially almost from the first, and the patient, toward morning, went into a slumber, respirations falling to ten per minute about five o'clock.

The next day the patient dressed herself, and spent the greater portion of it upon a sofa, and in a few days was as well as ever. It is interesting to add that for about six months the patient had no attack from her asthma.

Poisoning by Benzoline Vapor.

Poisoning by benzoline is of sufficiently rare occurrence to warrant the recording of the following case, which Dr. A. G. R. FOULERTON reports in the *Lancet*, in which, however, as will be seen, the effects of the poison may have been complicated to some extent by the high temperature in which the patient was at the same time placed.

"W. S——, aged twenty-five, a well-made and healthy-looking German, entered a zinc tank used for the storage of benzoline, and then all but empty, at 9 a. m., and at 11 a. m. was found lying insensible at the bottom of it. The tank was some 5 feet 6 inches high, with a small man-hole at the top, and exposed to the direct heat of a powerful sun, a thermometer inside registering 105° F. Shortly afterwards, when the man was brought to the infirmary, I found him in the following condition: Smelling strongly of benzoline; unable to stand, but capable of answering simple questions in an indistinct sort of way; moaning occasionally, and from time to time bursting into a hysterical laugh; face flushed; surface of body and limbs cold and clammy; muscular tremors and twitchings in the legs and arms; pupils widely dilated, reacting to a strong light stimulus; pulse 88, full and soft; respiration from 8 to 9 in the minute, deep and stertorous, irregular in rhythm, as much as fifteen seconds intervening between the separate inspirations; heart's action feeble; temperature in axilla 98.8°. Shortly after admission he vomited freely, the ejected matters being bile-colored, and smelling of benzoline.

"The man was given at once twenty-five minims of solution of ammonia with half a drachm of ether and put to bed, wrapped up in blankets, and hot-water bottles used. He then had half a drachm more of ether with some brandy, and was given frequent half-drachm doses of aromatic spirit of ammonia. For about two hours the patient remained in much the same condition, becoming at times absolutely unconscious, his breathing also getting worse at intervals. At the end of that time he began to improve rapidly, and was soon afterwards able to give a rational account of himself, but could not say how long he had been in the tank before he lost consciousness. His pupils were still dilated, and he complained of bad headache. He then had an attack of profuse sweating, and by the evening had completely recovered, no trace of his misadventure remaining beyond some slight headache. The temperature and respiration were normal, and the pulse

76. The urine passed presented nothing extraordinary, and a motion following the administration of half an ounce of castor oil was of a dark-green color.

"From these symptoms it will be seen that benzoline is a well-marked example of an inebriant poison. It was not thought necessary to give an emetic, as the man had merely been exposed to the vapor and had not swallowed any liquid benzoline; he settled the matter, however, by vomiting spontaneously. Theoretically, brandy and ether (being themselves inebriants) would seem to be contra-indicated, but the result was sufficiently satisfactory to justify their use. Looking back on the case, I cannot help thinking that the man might have been further benefited by a little blood-letting, for I regard the main symptoms as pointing to failure of the heart's action, diminished capillary tension, and consequent stagnation in the venous system, with over-distension of the right side of the heart. Were a similar case to occur to me again, I should be content, I think, with the application of external warmth and moderate bleeding, and free use of ammonia."

III. MATERIA MEDICA AND THERAPEUTICS.

Iodol in Ear Diseases.

Dr. Stetter, who has used iodol, the new inodorous substitute for iodoform, in a large number of cases of ear disease, finds that in acute purulent inflammatory affections iodol applications rapidly produce marked benefit, but that in chronic inflammations of the middle ear it is generally quite useless, or at best no better than other more common methods of treatment.

Iodine in Goitre.

Dr. Vogel, of Lucerne (Switzerland), has seen good results from treating small parenchymatous goitres by iodide of potassium, which he administered both internally (half a gramme daily), and externally (in the shape of a solution of 10 grammes of the salt in 180 of water, or as a salve). Relapses, however, often occurred. Iodoform ointment was less reliable than iodide of potassium. In cystic goitre, of a moderate size, he recommended injections of tincture of iodine (5 to 20 grammes) into the cyst after emptying, repeated every five or eight days.

Chloral Hydrate as a Vesicant.

Dr. Ivanovski recommends chloral hydrate as a vesicating material. He takes a piece of adhesive plaster and puts in the centre of it some powdered chloral, taking care to leave an uncovered margin. The plaster is then held over a flame until the chloral is melted, and is then applied to the previously oiled skin. In from ten to fifteen minutes a large blister will be formed, at the expense to the patient of only a slight burning sensation. The chloral should not be allowed to remain in contact with the skin longer than fifteen minutes, as there is then danger of causing ulceration.

Iodide of Potassium in Diphtheria.

Dr. Stepf, of Nuremberg, proposed in the *Deutsche Medicinische Wochenschrift*, No. 9, 1886, iodide of potassium as a remedy for diphtheria. He says:

"Iodine is a direct remedy for diphtheria, because it can be ingested for a long time, and, circulating in the blood, kills the bacteria. We can give iodide of potassium combined with the tincture of iodine; a two to four per cent. solution recommends itself for the first three years of life, and a four to ten per cent. solution for older children, a teaspoonful being given hourly."

Stepf claims to have had success with this mode of medication.

Naphthaline in Urinary Diseases.

Naphthaline, which has been used to disinfect the stools, has also the property of retarding the putrefaction of the urine, and may therefore be administered for

cases of urinary disorder in which the urine has a fetid odor. Daily doses of one gramme and a half of naphthaline in cases of pyelo-nephritis, cystitis, chronic prostatitis, and stricture with fistulæ, have rendered the urine sweet in from two to five days. The urine, from being turbid, purulent, and alkaline, becomes neutral or acid, and the quantity of pus is diminished. No disorder has been noted in the digestive processes. The drug does not augment the frequency of micturition.

Viburnum Prunifolium in Habitual and Threatened Abortion.

A writer in the *Russian Medical Review* gives an account of fifteen cases in which extract of viburnum prunifolium, in doses of two grains four times a day, was successful in preventing abortion. In six of the cases, hemorrhage, pain, and dilatation of the os uteri had already commenced. The remaining nine were cases in which there was known to be a tendency to abort. In some of the former class of cases, it was impossible to keep the patients in bed, as they were very poor, and were obliged to get about the house and do their ordinary household work.

Antifebrin.

A new febrifuge, called antifebrin, has lately been tried in the *clinique* of Dr. KUSSMAUL at Strasburg. Antifebrin is of special interest, inasmuch as its chemical composition differs entirely from that of the other antifebrile remedies, which have been in use up to the present time. It is obtained from anilin, and is a powder without smell, and not very soluble in water; it dissolves quickly, however, on addition of a little *Spiritus vini rectificatissimus*. It never causes sickness, and has a marked effect in reducing pyrexia. Given in hourly doses of 0.1 ($\frac{1}{10}$) gramme, it has the power of lowering the temperature 3 or 4 degrees; the effect, however, lasts but a short time.

Antiseptic Solutions for the Mouth.

Dr. MULLER finds as the result of numerous experiments that a solution of corrosive sublimate, 1 to 2,500, is the most effectual in preventing the decomposition of food-particles in the mouth and consequent caries of the teeth. But a solution of such a strength may produce unpleasant symptoms by absorption, and it is therefore preferable to use benzoic acid, 1 to 175, salicylic acid, 1 to 300, thymol, 1 to 1,500, or boracic acid, 1 to 30. A very good mouth-wash is the following: Thymol, four grains; benzoic acid, forty grains; tincture of eucalyptus, three drachms; water, twenty-five ounces. The mouth should be rinsed thoroughly with this solution for a period of half a minute every evening.

Tribromide of Allyl.

Tribromide of allyl is another compound that has only had its possible use in medicine discovered after a period of years. It was first prepared by Wurtz in 1857 (*Ann. de Chimie*, li. 91) by the reaction of iodide of allyl on one and a half times its weight of bromine, and is a colorless liquid, soluble in ether, boiling at 217° C., and having a specific gravity of 2.436. According to DR. DE FLEURY (*Archives de Pharm.*, August, page 352), this compound has been employed with

good effects in hysteria, asthma, angina pectoris, and infantile convulsions. It was administered in capsules, each containing 5 drops, two to four capsules being given daily, or subcutaneously in doses of 2 to 4 drops dissolved in one or two cubic centimetres of ether.

Piper Betel Leaves.

According to Messrs. JAHE & Co. (*Handelsberichte*), a supply of the leaves of the *Piper betel*, L., which are used in India for chewing with areca-nut, has recently been imported into Germany. An essential oil obtained from the leaves by distillation at Samarang by Schmitz, has been credited by him with having given good results in the treatment of catarrhal disorders and as an antiseptic. This claim has been substantially confirmed by Dr. Kleinstück, of Jena. The oil, which seems to be of an aldehyde nature, is said to oxidize with extreme rapidity, losing at the same time its characteristic ethereal odor and therapeutic properties. Great care will, therefore, be required in the transit of the leaves if the oil is to be distilled in Europe.

Dandelion as a Hepatic.

Dandelion root is recommended by DR. STEIGER (*Brit. Med. Jour.*) as a true hepatic in chronic gastric catarrh, enlargement of the liver from chronic congestion or fatty infiltration, in jaundice and obesity. He prepared a decoction from a handful of fresh spring roots, in 700 or 800 grammes of water, and obtained 500 grammes of fluid, to which a teaspoonful of bicarbonate of soda was added. The decoction was taken in three doses during the forenoon. The course lasted three or four weeks. Dr. Steiger recommended Plummer's pills, as an energetic alterative and absorbent, in cases of syphilis in weak persons and children; in scrofula, with swollen glands; and in obscure cerebral disease, with paralysis of the abducens, headache, and giddiness.

Turpentine Oil in Diphtheria.

The treatment of diphtheria by turpentine oil has found an advocate in Dr. G. SCHENKER, of Aarau, in Switzerland, who used the drug in thirty-six cases, and lost only five (13.88 per cent.). In four of the cases (11.1 per cent.) tracheotomy proved necessary; all the patients recovered. In one of the cases, a mixture of 50 grammes of turpentine oil with 200 grammes of coal-tar was atomized by means of a steam spray apparatus in the patient's room. In several other cases, a mixture of 80 grammes of the oil with 200 grammes of the tar was burnt (after Delthill's method). In the remainder, the author gave internally from ten drops to a teaspoonful of the oil from one to three times daily, in milk, sugared water, or mucilage. No unpleasant secondary effects were ever observed.

The Night-Sweats of Phthisis Treated by Secale Cornutum.

MINGOT reports in the *Journal de Médicine de Paris* (July 4, 1886) as to the unexpectedly favorable results obtained with secale cornutum in the night-sweats of phthisical subjects. He observed in Tenneson's clinics at Paris that 15½ to 31 grains of ergot given in powder form, or, better, 2 fl. dr. of ergotinine injected hypodermically half an hour previous to the expected appearance of the sweat,

could suppress the latter for a week or even longer. No other of the numerous remedies recommend against night-sweats was, save atropine, found to have so great an effect as ergot or ergotinine. To be sure, the tubercular process is in no way influenced by the exhibition of this remedy, but it is gratifying to be able to stay one of the most annoying, and at the same time weakening, factors of the disease.

Turpentine in Phosphorus Poisoning.

In a paper by Dr. Rondot, of Bordeaux, the author demonstrated, from clinical observations and experiments, the efficacy of "Turpentine in the Treatment of Poisoning by Phosphorus," when taken either immediately or even some hours after the poison has been swallowed. The turpentine and phosphorus combine and are eliminated without causing any other morbid phenomena than a local reaction on the alimentary and urinary organs. It is important to administer the turpentine at the outset, so as to neutralize the greatest quantity possible of the poison. Even if the phosphorus be not completely neutralized, the essential oil of turpentine renders the symptoms milder, and favors recovery. Turpentine diminishes hæmorrhage and the nervous symptoms which follow poisoning by phosphorus.

Antipyrin.

Professor A. Fraenkel, assistant physician in the *clinique* of Dr. Leyden, has published the results of some experiments with antipyrin in the treatment of rheumatism. This substance is a specific in acute articular rheumatism. Out of thirteen cases of slight severity, a cure was rapidly effected in nine, whilst out of twenty-one serious cases, the remedy was successful in four. Antipyrin has the great advantage over other specific remedies for rheumatism that it has no bad subsequent effect. While salicyl causes tingling in the ears and hallucinations, Professor Fraenkel only once observed sickness, and once a peculiar eruption, after the use of antipyrin. In spite of its superiority in this respect, antipyrin has no effect in preventing the development of endocarditis; it cannot, therefore, take the place of salicylic acid in all cases.

Lantanine.

Lantanine is an alkaloid discovered by M. Negrete, and extracted from Yerba sagrata, of the family of verbenas. M. Buiza has observed that, like quinine, this alkaloid had some action on the circulation. It slows the nutrition, and at the same time lowers the temperature. The most delicate stomachs tolerate lantanine. Intermittent fevers that prove refractory to quinine have yielded to the influence of two grammes of lantanine. In order to produce antipyretic effects in febrile conditions the dose employed is from one to two grammes in twenty-four hours, given in pills of ten centigrammes. In intermittent fevers the drug is administered immediately after the paroxysm. Ninety-five times out of a hundred a further paroxysm will not appear. The tincture of lantana cannot be employed owing to its intense bitterness, which cannot be masked by syrup or wine.

Tannin in Inflammation of the Serous and Mucous Membranes.

Dubané, in clinical observations, (*L'Union Médicale*, September 30, 1886), has found that tannin, given by the gastro-intestinal tract, diminishes the violence of

the symptoms in severe acute inflammations of the serous membranes; he has obtained success also in chronic pleurisy and localized peritonitis.

Dubané has used tannin in intestinal and bronchial inflammations and pulmonary congestions; he thinks, with Bichat, that the drug acts upon the epithelial elements themselves. The author prefers tannin prepared with ether, and gives daily doses of twenty or thirty centigrammes up to ten or twelve grammes, without ill effect. He has used tannin in purulent pleurisy, pelvic peritonitis, perityphlitis, puerperal peritonitis, cerebro-spinal meningitis, double pneumonia, and cerebral rheumatism, with a mortality, including cases of all grades and severity, of thirty-one and one-fourth per cent.

Perchloride of Iron in Anthrax and in Ingrowing Nail.

At a meeting of the Lucerne (Switzerland) Medical Society, Dr. ALFRED STEIGER made a communication on the local use of perchloride of iron in anthrax (as recommended by an English practitioner of Buenos Ayres, whose name could not be ascertained). Seven patients treated by the author all recovered within a few days, after a single painting with liquor ferri sesquichloridi. "Perchloride of iron is," he said, "a true specific for anthrax; even advanced cases are cut short by it." He obtained, also, excellent results from the same drug in many cases of ingrowing nails. After cleansing the ulcerated surface, he painted it twice daily with a fine brush, and ordered rest. Within a few days, the soft parts became hard and insensitive, and contracted, while the edge of the nail was raised from its groove. The internal administration of the drug gave very good results in Werlhof's disease, albuminuria after scarlatina, diabetes mellitus, and renal and vesical hæmaturia.

Pulsatilla.

According to M. BRONEVSKI, in *L'Union Méd.*, anemonin, a substance prepared from the *anemoni pulsatilla*, first irritates, then paralyzes the respiratory centre. It diminishes cardiac activity and voluntary movement by its action on the spinal nerve-centres. It causes death in dogs and rabbits by paralyzing the heart, in doses of 3 grams of the extract administered subcutaneously. This quantity corresponds to ten of infusion or decoction, and to one to two of the tincture. 0.1 gram of anemonin proved fatal to a rabbit in an hour; dogs succumbed to a subcutaneous injection of 2 grams in from twenty-four to thirty-six hours, with increasing dyspnœa, torpor, paralysis of all the limbs, diarrhœa, and cessation of cardiac movement. Autopsy showed hyperæmia of all the parenchymatous organs. Therapeutically, anemonin is useful in bronchitis, convulsive cough, and asthma. The daily dose is from 0.05 to 0.1 gram taken twice in powder. A larger dose causes headache and heaviness in the limbs.

Quinine as an Anaphrodisiac.

Dr. JOHN A. MCKINNON, of Selma, Ala., (*Med. Record*, Oct. 30), has found in his practice that the continuous use of sulphate of quinine will reduce the venereal desire, and in cases of old age it will destroy the animal propensity completely. He says that he has had cases under observation for several years who took from five to twenty grains daily, not for antimalarial purposes, but because they had

formed the quinine habit, and he has found on inquiry of such patients that the venereal desire in them was diminished, impaired, or destroyed. In most cases the subjects would become alarmed at their condition, and ask for relief. In the treatment of gonorrhœa in this malarious section, Dr. McKinnon often administers quinine in the inflammatory stage, for the dual purpose of counteracting any malarial complication and to control chordee. It must for this purpose be administered in not less than ten-grain doses at proper intervals, and it acts, he writes, in this respect more satisfactorily than camphor, lupuline, or the bromides.

Kola Nut.

The Therapeutic Gazette says: We have in several previous issues of the *Gazette* called attention to the action of the kola nut, and a paper recently published by Dr. N. HUDSON (*Med. Times*, June 26, 1886), still further encourages more definite trials of this remarkable agent. Dr. Hudson reports a case of intermittent and irregular heart's action, with dyspnœa and faintness, occurring as a consequence of endocarditis in a rheumatic subject, in which the use of about 150 grs. of kola paste, taken once or twice a day, in hot milk, prepared like chocolate, caused great relief. The heart's action became more regular, dyspnœa and faintness disappeared, and the violent headaches to which the patient had been previously subject were prevented. The employment of the kola seemed to be satisfying to the appetite, and the bodily weight increased from ninety-eight to one hundred and five pounds. No marked change was observed in the character of the urine, the quantity voided being somewhat increased, but the total quantity of urea excreted remaining at 10 or 12 grammes daily.

Quinine and Oil of Turpentine in Malignant Pustule.

Dr. DON F. RIVAS describes in *La Union de la Ciencias Médicas* some cases of malignant pustule which were cured by the application of a paste composed of quinine and oil of turpentine. One of the cases was that of a shepherd, in whose flock the disease had manifested itself. He was stung by a mosquito on the forehead, and two hours afterwards the head and neck were extremely œdematous. The paste was applied, and the pain and swelling shortly diminished. A couple of days later a large quantity of sanguinolent fluid was discharged, and by the fourth day the man was quite well. Another shepherd of the same flock, who was similarly affected, made use of some of his colleague's paste without consulting a doctor, and was also cured in four days. A third case was that of a woman who had a malignant pustule on the hand, which was unaffected by various remedies which were applied, but on the application of the quinine and turpentine paste, the severe pain ceased almost immediately, and the œdema rapidly diminished, the patient being quite restored to health in four days' time.

Ricinus Communis.

DR. THOMAS DIXON contributes a paper on this subject to the *Brit. Med. Jour.* (Nov. 27), the object of which was to throw light on the connection between the activity of the seeds and that of the oil. The published accounts of poisonings and of investigations into the nature of the seeds were recorded. The author gave the results of experiments on rabbits made with the seeds in their natural

state, and with an extract prepared after Bübnow's method. It was pointed out that *post mortem* examination showed that, when the rabbit was poisoned by castor-oil, diarrhœa invariably occurred, death never took place before the second day, and the intestine did not show any trace of congestion or inflammation; but, after poisoning by the seeds, death might occur in twelve hours without positive diarrhœa, and the intestine always showed excessive vascular engorgement. A description of the castor-oil cake, as prepared by the author, was given; and it was suggested that, as this is highly albuminous, and by cooking becomes harmless, it might be useful as an article of food in India in time of famine.

Solanine.

An account of the properties of solanine has recently appeared in the *Bulletin Général de Thérapeutique* from the pen of Dr. A. G. de Montguyon. Solanine poisons the terminal motor plates of organic life, narcotizes the medulla, spinal cord, and nerve trunks, and so produces paralysis of the terminal extremities of the sensory and motor nerves. These physiological effects allow solanine to be classed as an analgesic agent. Solanine may be prescribed without risk in strong doses. It has none of the inconveniences of morphine and atropine, has no cumulative action, and is specially a substitute for morphine. It does not cause congestion of the brain, even in elderly people, and probably not in children. In all conditions of excitement, spasm, or pain, solanine may be employed with a prospect of success. The ordinary dose is thirty centigrammes three or four times a day. It may be given fasting or after meals, and the dose may be greatly increased. For hypodermic injections a solution of the chlorhydrate in distilled water may be used in the proportion of from one to five centigrammes per dose, administered from two to four times a day.

Note on Hypnone.

In the *Therapeutic Gazette* we read: Urethan, Jaksch's discovery, announced last year with so much *éclat* and auspicious anticipation, has been unable to establish itself in the faith of the profession, and it is little likely that the coveted sanctum of any Pharmacopœia will ever open itself to a remedy of so uncertain and unreliable a nature. Hypnone, the successor of urethan, appears to be no luckier than the latter. It has figured in the medical journals for some time, was complimented on its felicitous name, and—"the rest is silence."

Hirt and Moebs, of Breslau, went to the expense and trouble of instituting exhaustive experiments with hypnone, giving the drug in as large doses as 7 grains, and were naturally rather grieved to find the results obtained wholly negative, especially in view of Jaksch's loud claims as to the virtues of the drug. The experimenters write to the *Breslauer Artzliche Zeitschrift:* "The results obtained with hypnone were in every instance positively illusory, and the drug ought to attract no more attention from the profession."

The above sentence will no doubt be condemned by other observers, but it seems as if the drug is doomed to oblivion.

On Inspirations of Cold Air in Fever.

The *Therapeutic Gazette* says: Dr. Iwan Woitkewitsch communicates to the

St. Petersburg Med. Wochenschrift, No. 24, 1886, his views on the value of cold air inspirations in febrile affections. His observations were made in seventy-one instances, and comprise cases of typhoid fever, pleurisy, and pneumonia. The air was cooled by means of an apparatus constructed for the purpose by Woitkewitsch, and applied to the patient for fifteen to forty-seven minutes. The observer draws the following conclusions:

1. The febrile temperature was lowered by the cold air only immaterially and for a short time.

2. Pulse and respiration, however, were considerably slowed.

3. The general subjective state of health and sleep improved likewise, though for a short time only.

4. The phenomena of the bronchial catarrh decreased to an eminent degree under the influence of cold-air inspirations.

5. The inspirations exerted a favorable influence upon the general course of the disease, and in no instance proved to be injurious.

Novel Treatment of Diphtheria by Digitalin and Sulphide of Calcium.

The *Therapeutic Gazette* says: We condense the following important therapeutical considerations from the *Archives de Pharmacie*, September 5, 1886:

Dr. GALICIER some time ago eulogized a novel form of treating diphtheria, which, it seemed, had given excellent results. A paper appearing in the *Moniteur Therapeutique* of August, 1885, by Dr. Cug, of Pau, in which this physician claims to have saved two cases of diphtheria—two boys, aged 4½ years and 5 months respectively—calls our attention anew to the plan proposed by Dr. Galicier. This physician orders the following pills:

℞.—Sulphide of calcium . . . . . 0.05.
Digitalin . . . . . 0.001.
Arseniate of quinine . . . . . 0.001. M.
Fiant pil.
S.—Take one every hour, day and night.

Both Cug and Galicier claim that no intoxication was ever produced by this remedy. The great general intoxication probably prevents any further intoxication from the part of digitalin.

The pills are usually continued for a couple of days.

Hypodermic Injection of Hydrochlorate of Cocaine, in the Removal of Epithelioma of Lip.

Dr. HENRY B. POPE thus writes in the *Brit. Med. Jour*: On August 23d, 1886, J. S., shoemaker, aged 85 years, consulted me with reference to an epithelioma of the lip, which then caused him considerable discomfort and annoyance, but, gradually increasing in size, it so interfered with mastication that he consented to its removal. It was decided not to produce general anæsthesia: (1) because his lungs were emphysematous; (2) because of his great age.

The two lines of incision having been decided on, I injected 5 minims of a ten per cent. solution of the hydrochlorate of cocaine five minutes before commencing operation. I then removed a triangular-shaped piece, the base of which

measured over an inch and a half, and completed the operation in the ordinary way, bringing the edges of the wound together with hair-lip pins and twisted suture, and bringing the mucous surface of the lip together with a silk suture. During the operation, the patient made no complaint of pain; he said that he felt very little of it. On removing the pins, seventy-two hours later, I was pleased to see the wound united throughout by first intention. Two days later he walked to my surgery, distant a mile and a half, and, on the same day, set to work at his trade again, after five days' absence. My friend Dr. Chute kindly assisted me in the operation.

Sparteine in Cardiac Affections.

Basing his theory on the results obtained by M. Laborde by experiments on animals with sparteine, Professor GERMAIN SÉE has applied this remedy to the treatment of cardiac affections. He employs the sulphate of sparteine in doses of 10 centigrammes on an average, in which quantity it augments the intensity and the duration of the ventricular contractions. Professor Sée considers that sparteine is a dynamic agent of the heart, the movements of which it regulates. In this respect it acts like digitalis and the lily of the valley, but its action is more prompt and more durable. It immediately regulates the cardiac rhythm when this is altered, and has proved itself superior in this case to the other agents. It is indicated in grave atonic affections, with slackening of the movements of the heart. All these phenomena appear after an hour or more, and persist three or four days after the suspension of the medicine. During this period the strength of the patient increases and the respiration is easily performed. The urinary functions do not appear to be affected by the small dose employed. The sulphate of sparteine appears to be useful when the heart is affected in its tissues, or when there is insufficiency in its action to overcome the obstacles existing in the circulation. When the pulse is feeble, irregular, arhythmic, the sulphate of sparteine reëstablishes the normal state. When the circulation is slackened, the drug overcomes this functional defect, in augmenting and in preserving the force acquired by the cardiac muscle.

Cocaine in the Removal of Sebaceous Cysts.

Dr. CHARLES RANDOLPH thus writes in the *Brit. Med. Jour:* A little girl, aged 12, recently came to my surgery for the removal of a small sebaceous cyst, situated under the right eyelid. Being unwilling to put her under chloroform, as she had to walk home some distance, I determined to try the effect of cocaine. Having placed her upon the table, I injected under the skin, immediately over the tumor, five minims of a 4 per cent. solution of the hydrochlorate, which I have had by me for six months, having procured it from Gale and Co. in April last. A piece of lint, wetted with the solution, was applied to the skin, and a few drops were purposely allowed to fall into the eye.

In seven minutes I made the necessary incision, and turned out the contents of the cyst. The capsule was firmly adherent at every part, and required a great deal of pulling and dissection before it could be finally removed. The operation, including the insertion of one suture, must have taken at least ten minutes, and, under ordinary circumstances, would have been very painful. My friend, Dr,

Langley Mills, who kindly assisted, will bear me out in saying that, with the exception of the prick of the hypodermic syringe, the little girl suffered not the slightest pain from first to last. She was frequently asked if it hurt her, and always replied "No." The only thing of which she complained was that once her nose was pushed a little upon one side.

There were no ill effects from the cocaine, and the wound healed by first intention.

Ol. Pini Sylvestris in the Treatment of Chronic Bronchitis.

During last winter I treated, says Dr. A. W. ROBSON (*Brit. Med. Jour.*), several cases of chronic bronchitis with Ol. pini sylvestris, *B. P.*, a drug which I believe had till then been restricted to external uses only. The results obtained have prompted me to give them publication. Judging from the action on mucous membranes of the terebinthinate drugs in general, I was induced to give Ol. pini sylvestris a trial. The specimen used I obtained from P. Harris & Co., of Birmingham. The dose given was five minims every four hours, and in some cases where relief did not follow in forty-eight hours, it was increased to ten minims. None of the patients treated owed their bronchial affection to cardiac disease. Of forty-three cases of which I have notes before me, the cough complained of was eased in twenty-eight. The dyspnœa was relieved in twenty-eight, and the difficulty in expectoration was benefited in thirty-eight cases, this being the symptom that seemed to be most relieved. The ages of the patients varied from 50 to 70.

In one case only did the drug fail to relieve one or more symptoms. Two patients complained of a fiery taste in the mouth, the hot sensation spreading subsequently all over the body; and one woman was obliged to discontinue its use, as she found the medicine caused scalding urine and frequent micturition. In many cases where stimulating expectorants had failed, I found Ol. pini sylvestris give relief. The results I have obtained hitherto are so satisfactory to me, that I shall continue its use.

Boracic Acid as a Local Anaesthetic.

DR. A. C. EWING narrates the following case in *American Practitioner and News* of November 13, 1886:

George S., a railroad employé, came to my office October 19, 1886, with a deep suppurating wound in the palm of the left hand, having two weeks previously received the injury by being thrown forcibly against a moderately sharp instrument, which cut, or rather tore its way through to the bones. He was suffering excruciating pain; his hand being in a semiflexed position from involuntary, and, to some extent, voluntary contraction. Upon taking hold of the hand and making but a slight effort to straighten his fingers, he fairly cried out from pain. Taking about thirty grains of powdered boracic acid and dissolving it in half an ounce of water, I saturated a pad of absorbent lint in the solution and applied it directly to the wound, securing it by means of a splint and bandage. I directed him to return on the next day. In the morning I was agreeably surprised to find that he had not suffered in the least during the night. I took off the splint and found, by using considerable force, that I could almost entirely overcome the contracted tendons and fascia, the wound gaping open as I did so, but without

having given him the least inconvenience; in fact, he himself pulled open the wound to "see how deep" it was, squeezing out some pent-up pus, and in doing so felt no more pain than if he were squeezing healthy tissue. I am still using the same dressing once daily, because of its excellent antiseptic qualities, and the wound is healing rapidly by granulation.

Balsam of Copaiba in Gonorrhœal Ophthalmia.

Dr. S. Haynes, of Saranac, N. Y., writes to the *New York Medical Record* (October 9, 1886) that he was called to see an infant, four days old, who was suffering from conjunctivitis, contracted from the mother, who had gonorrhœa at the time. The inflammation had existed two days, and the cornea was found covered with thick pus, and the eyelids were so swollen that they could be separated with difficulty even when the child was under the influence of chloroform. For several days the remedies used seemed only to hold the disease in check, and the infant meanwhile was rapidly losing flesh. Severe stomatitis was also developed. Applications were now made of balsam of copaiba to the temples, the external surface of the lids, and above the eyebrows three times a day, a little being occasionally inserted between the lids. The pus was carefully removed every hour by pledgets of cotton, wet with solutions of alum or sulphate of zinc, and fresh butter was applied to the edges of the lids every night. From the commencement of the use of the balsam a marked improvement was noticed, and in three or four weeks the cornea was perfectly clear and free from disease, and the child had gained in flesh. The case had everything against it, as the parents lived six miles away and could be visited only occasionally, the mother was confined to bed for a great part of the time, and the family were ignorant and suffered from the want of many of the necessaries of life. Dr. Haynes states that the use of the balsam of copaiba was suggested by an article which he read some time ago, but he has forgotten both the name of the writer and the medical journal in which the article appeared.

Acorn Cocoa in the Treatment of Diarrhœa and Vomiting in Children.

Acorn cocoa is a preparation of ordinary cocoa powdered and freed from fat, to which are added the soluble parts of roasted acorns without cellulose, and a little sugar and roasted flour. Liebreich suggested this combination, and that it should be tried in the treatment of diarrhœa and vomiting of children, and it was found that of one hundred and two cases of diarrhœa with vomiting six only died, and the remainder recovered in from one to eight days. This combination is now manufactured as a substitute for tea, coffee, or cocoa, and is refreshing, tasty, and nutritive even for adults. Dr. F. W. Elsner (*Australasian Med. Gazette*, June, 1886,) has also had a considerable experience with this remedy in this class of cases, and has obtained marked success by its use. His mode of administration was to mix a teaspoonful of it with cold water in a small cup, and then to boil it, constantly stirring, and this quantity is administered thrice daily by means of a spoon or feeding-cup. All other food and medicine is prohibited, and the quantity may be gradually reduced. Dr. Elsner has notes of twenty cases of continuous and exhausting diarrhœa with persistent vomiting, which had continued for three

weeks in two cases and for shorter periods in the others. In half the cases various remedies had been employed before the acorn cocoa was administered; in the others, however, it was the first drug given, and its effect was rapid and complete in each instance, and it never took more than two days to bring about improvement, while twelve days was the outside at which a complete cure was effected.

Chloroform Vapor in Painful Ear Cases.

Dr. RICHARD A. D. ROBB says (*Brit. Med. Jour.*), that he would like to draw the attention of the practitioners to the use of this vapor in ear cases, so that it may become better known and more frequently adopted, as at least a preliminary part of the treatment in cases in which intolerable pain is the chief complaint. He has very often used it with almost magical effects and very pleasing results in cases in which the pain in the ear was so great that the patients could not bear the part to be touched even in the gentlest possible manner. In cases of furunculosis, and in diffuse inflammation of the external meatus, as well as in acute inflammation of the tympanic membrane, he has found it relieve the pain so much that the patients considered themselves cured. In some cases the pain was kept in abeyance so long that the necessary manipulations and treatment were carried out without the least inconvenience to the patient, and in many cases there was no return of the distressing symptoms.

Its application he has also found exceedingly useful (in fact, a complete cure) in cases of otalgia, in which, on examination of the ear by means of the speculum and mirror, no apparent cause for the pain could be ascertained. Again, in cases of neuralgia, where the pain was shooting all round the ear, and seemed to originate from it, the relief was permanent. Also, in cases of earache arising from carious teeth, as well as in cases of toothache of the molars, without any pain in the ear, it has proved very beneficial.

It is a very simple matter to introduce the vapor into the ear, and the only thing to guard against is the introduction of the chloroform itself, which might irritate the part and perhaps cause unnecessary discomfort.

Treatment of Typhoid Conditions by Benzoic and Salicylic Acids.

At a recent meeting of the Société Médicale des Hôpitaux, M. ALBERT ROBIN proposed a new method of treating typhoid conditions, in which the organism is always overcharged with the incompletely oxidized residues of nutrition. These residues were eliminated with difficulty, owing to the fact that they are but slightly soluble in the fluids of the human body. There were certain pharmaceutical substances which combine with the nitrogenous residues of the human organism, and rendered them more soluble, and this facilitated their elimination. The principal agents which acted in this way were benzoic and salicylic acids, which, after combining with nitrogenous substances such as glycocol, passed into the urine as salicyluric and hippuric acids. M. Robin, in his first experiment, studied the physiological action of benzoic acid on combustible substances. He administered benzoic acid to persons in good health, whom he had previously dieted for a few days. Under the influence of this treatment, the solid constituents of

urine slightly decreased, and there was also a smaller proportion of urea, consequently its relative proportion to solid matter was lower. These results could not be attributed to a moderating action of benzoic acid on combustion, but to the action of the acid in carrying away into the urine part of the combustible substances. On another occasion, M. Robin administered benzoic acid to five patients with typhoid fever, in whose urine he noticed an increase in the weight of urea and solid matter. Salicylic acid and salts gave the same results, as also did substances such as toluene. zylene, toluic acid, ethyl, and propylbenzine, which, in passing through the system, become transformed into benzoic acid.

Subcutaneous Injection of Salt Solution.

Dr. ALBERT H. TUTTLE writes from Vienna to the *Boston Medical and Surgical Journal:* "I lately witnessed the subcutaneous injection of 50 cc. of a salt solution into the body of a boy seven years old, by Professor Monti; and believing it may be of interest to your readers, and perhaps at some time useful, I send you this brief description of his method. The requisites are: A piece of rubber tubing about six feet long, a large hypodermic needle, and a graduated beaker containing a solution of salt. The salt solution is heated to 100° F., and then placed about four feet above the patient, on a stool that rests on the top of the table. The hypodermic needle is attached to one end of the rubber tubing. The tubing is filled with water and one end is inserted into the salt solution, then the needle end of the tube is lowered and the contents are allowed to run off until the stream becomes warm from the salt solution in the beaker. The needle is now inserted into the subcutaneous tissue while the stream is flowing. At this moment an assistant reads the level of the fluid in the beaker. This done, one can tell exactly, by means of the scale on the beaker, how much of the solution has been injected. The tissue is distended by the fluid, forming a tumor which disappears in the course of an hour or two. In the case I saw, the injection was made an inch and a half below the navel, and a half inch to the right of the median line. The swelling was an inch and a half in diameter, and about half an inch in height. The whole time occupied in giving the injection and making the necessary preparations, did not exceed twenty minutes. The method has been employed in the collapse of cholera infantum, and may further be found useful in some of those cases where intravenous injection has formerly been resorted to."

An Impromptu Stomach-Pump.

Dr. CHARLES N. DIXON JONES, of Brooklyn, writes to the *Medical Record*, October 16, 1886, as follows: "Apropos of the article on 'An Impromptu Pump for Stomach Irrigation,' by Dr. S. E. Post, allow me to relate the following instance of inventive ingenuity. About four months ago I provided a patient, suffering with gastric catarrh and dilatation, with the simple siphon apparatus and a cocaine solution, for stomach irrigation. From experience he found that the siphon did not at all times act as satisfactorily as was desirable, so he resorted to the following modification: He obtained a three-way stop-cock, made from gas-pipe. To one limb of the stop-cock he attached the stomach-tube; to the opposite limb a large fountain syringe was attached by means of rubber tubing; the outlet was connected with a rubber tube, to the extremity of which could be attached a large

rubber-bag syringe, such as is commonly used for a flower-sprinkler. The apparatus is worked as follows: The stomach-tube is introduced, and then the stop-cock so manipulated as to allow the fluid to flow directly from the fountain-syringe into the stomach. After sufficient fluid has flowed into the stomach, the stop-cock is turned, so that the fluid may flow back through the outlet. If it does not flow readily, the bag-syringe is attached, and by compressing this a few times a powerful suction force is induced. At the same time compression of the syringe a few times in rapid succession will cause a swashing and churning of the fluid contained in the stomach, so that the walls are thoroughly cleansed. Of course, such an instrument is capable of numerous modifications and improvements, but this gentleman constructed it to meet a special indication, and, as far as I know, independently of any knowledge of the use of the principle involved in medicine."

Strychnine-Poisoning Treated by Chloral Hydrate Injections.

Dr. James Grierson Brown thus writes in the *Brit. Med. Jour.*: At 8:15 a. m., on September 23d last, I was summoned to 48 Netherfield Road, N., to see a woman, who had been moaning and screaming for some time, but was now speechless, and seemed very bad. She was 35 years of age, married, but deserted by her husband a few days previously.

She was lying on her back in bed, dressed, with the exception of her hat; her eyes closed; apparently unconscious; she could not be roused; arms pressed against sides, and hands clasped over bosom; could not be unclasped. The skin was of reddish purple color, and hot; tongue was dry; pulse weak, and 96.

Every few minutes she would give a groan. Her hands became more firmly pressed to her sides; her legs became rigid, and her back as stiff as a board; and, on making an attempt to raise her, she did not bend. There was an increase in her pulse-rate, and her respiration, previously shallow, seemed to stop. There was a peculiar hoarse rattling in her throat, and her face became of a bluish purple color. On the mantelpiece I found a tea-cup coated with a dry-bluish material, which tasted purely bitter; and, in the chamber-utensil, an empty packet of Hunter's vermin-killer. An attempt to introduce an emetic failed, and the passage of a tube down her œsophagus brought on such a spasm as almost carried her off; so that I procured a solution of one in two of chloral hydrate, and gave her three hypodermic injections, of about eight grains at a time. This speedily reduced the spasm; and, at nine o'clock, she had a fourth injection, and was made to swallow half an ounce of tannate of glycerine. She went to sleep, and was still sleeping at noon. She swallowed some tea; made a slow recovery; and is now in an asylum.

The Use of Cocaine in the Hypodermic Treatment of Syphilis.

The *Therapeutic Gazette* says: The pain attending the hypodermic treatment of syphilis, no matter whether calomel, corrosive sublimate, the cyanate or formamidate of mercury is used, is a serious drawback to another equally efficient as convenient mode of medication. This objection becomes especially appreciable in cases where the hypodermic method of treatment for various reasons cannot be supplanted by any other, particularly the inunction cure.

MANDELBAUM reports in the *Monatschrifte für Praktische Dermatologie*, 1886, No. 6, two such cases, ladies, in whom, for certain reasons, the treatment had to be kept secret. These patients could be best attended to after office-hours at the physician's residence, the cyanate of mercury being injected according to the requisites of the case. Unfortunately, they proved so susceptible to the pain connected with the operation that the injections had to be abandoned. Induced by the publication of Wölfler of the anæsthetizing action of cocaine injections, Mandelbaum tried the following combination with the greatest success:

℞. Cocain. Muriat . . . . . 0.05.
Hydrarg. bicyanid . . . . . 0.01.
Aquæ dest . . . . . 1.00. M.
S.—For hypodermic use as one dose.

At first Mandelbaum injected the cocaine solution first, and then, after two or three minutes, the mercury; later he found the simultaneous exhibition of cocaine and mercury to be more convenient and equally effective.

The assistance of these cocaine injections recommends itself also in the use of other hypodermically applied drugs, with the view to eliminate the attending pain.

The Diuretic Action of Mercury.

In the *Practitioner*, September, 1886, an article is contributed by SPILLER LOCKE on the diuretic action of mercury. It has long been known that the action of digitalis and squills as diuretics is greatly assisted by the addition of a little mercury, and lately calomel alone has been lauded as a diuretic. The clue as to the diuretic action of mercury seems to be explained by the connection between bile-secretion and the formation of urea, lately demonstrated by Noël-Paton. This observer has noticed that uniformly a direct relation can be traced between the activity of a drug as a hepatic stimulant and its activity in causing an increased formation and excretion of the most important nitrogenous waste-products. The administration of perchloride of mercury to a dog in a state of nitrogenous equilibrium causes a marked increase in the amounts of urea, uric acid, and water excreted. Drugs which cause an increased formation of bile also cause an increased formation of urea: this fact gives new ground for the belief that the liver is the great seat for the formation of urea. Mercuric salts cause a greatly increased secretion of bile, as well as of urea, besides causing a destruction of red blood-corpuscles according to Noël-Paton. It is well known that an increased quantity of urea in the blood acts as a powerful diuretic, and the good effects derived from the use of mercury in combination with digitalis and squills are readily explained by its action on some metabolic process—one outcome of which is the secretion of bile, and another the formation of urea. Rutherford has shown that calomel does not cause increased secretion of bile, and that mercuric salts only had a diuretic action; consequently in those cases in which calomel has produced diuresis, there must either have been some trace of the per-salt present, or the calomel has been transformed in the alimentary canal into the per-salt.

The Local Treatment of Pseudo-Membranous Croup—Intubation of the Larynx.

Dr. J. Lewis Smith, in an article in the October number of *The American Journal of the Medical Sciences*, expresses his belief that intubation is destined to be employed more generally than tracheotomy in the treatment of pseudo-membranous croup. He maintains that in all cases in which the obstruction is limited to the larynx and trachea, intubation relieves the dyspnœa as quickly, effectually, and pemanently as does tracheotomy. It gives, in most instances, complete relief for a time. If the respiration subsequently become embarrassed, and no benefit occur from cleaning the tube, tracheotomy may be required. Intubation may properly precede tracheotomy in most cases.

Not a few parents in the middle and lower classes allow their children to die rather than consent to this operation. On the other hand, few parents will object to intubation, and when they see the relief which it produces they will probably consent more readily to tracheotomy if the dyspnœa should return. If only one of these operations be performed, statistics thus far show nearly as good a result from intubation as from tracheotomy.

Now that diphtheria has become so common, the physician should be provided with the necessary instruments for intubation whenever diphtheria appears in his locality. Alkaline and trypsin inhalations, properly and almost constantly used, and intubation performed early, when the patient begins to suffer from dyspnœa, would probably prevent the necessity of tracheotomy in a large proportion of instances. But if such treatment do not fully relieve the dyspnœa, it will in most instances so diminish and retard the progress of croup that the physician, remote from help and unfavorably situated for the performance of tracheotomy, will have ample time to prepare for this operation. Intubation may prevent the need of tracheotomy, but if not, it presents no hindrance to it.

The New Ungent: Lanoline.

M. Doyon, in an article in the *Annales de Dermatologie*, states that the new substance, introduced into medicine by Professor Oscar Liebreich, called lanoline, is rapidly absorbed by the skin. After being rubbed with lanoline, the skin appears firmer and more turgescent, and, at the same time, the surface is almost dry; whilst with vaseline it preserves a shiny appearance, even after energetic friction. This rapid absorption, which may be shown experimentally, seems to be due to the intimate connection existing between lanoline and the fat of the epithelium. Lanoline has been shown experimentally to have no injurious action upon healthy or unhealthy skin, but acts favorably on morbid phenomena occurring in the deep layers of the skin. Doyon has used ointments prepared with lanoline, instead of vaseline or glycerine, in four hundred cases of persons affected with cutaneous lesions, and has not found injurious effects in any one of them, not even in those cases where there was great irritability of the skin. In the case of a child suffering from impetiginous eczema of the skin of the head and face, the use of lanoline, containing salicylic acid at 2 per cent., produced cure. In cases of ulcerated impetigo, or of inflamed eczema, immediate benefit has been derived from the use of the following ointment: Salicylic acid, 2 grammes; lanoline, 50 grammes; zinc oxide, starch, āā, 24 grammes. In the

case of a patient who had suffered for several years from a severe and rare form of pityriasis, three frictions of the following ointment sufficed to destroy the parasite: Salicylic acid, 2 grammes; precipitated sulphur, 10 grammes; lanoline, 100 grammes. In affections of the skin of the head, carbolic lanoline and sulphur suffice to remove furfuraceous desquamation. Doyon advises the addition of tincture of benzoine, in a rough state of the skin. His clinical experience fully confirms the favourable views which others have expressed of lanoline as a great improvement upon either lard or vaseline as a basis for unguents and cosmetics.

The Phosphates in Therapeutics.

The *Therapeutic Gazette* tells us that LOGEAIT writes in the *Archives de Pharmacie*, September 5, 1886, the following concerning the value of phosphates in the treatment of diseases:

The medicinal worth of the phosphates of lime has hitherto been singularly overrated. The triple phosphate of lime, the biphosphate and monophosphate (acid phosphate), as well as the other principal preparations, such as the chlorohydrophosphate, lacto- and citro-phosphates, are gradually disappearing from the field of practice, their places being occupied by the phosphates of potassium and sodium. Very recent observations have yielded the fact that the action of the phosphates of lime is exceedingly uncertain and doubtful, as they cannot be absorbed in the economy. No doubt, says Logeait, the soluble phosphates of lime remain dissolved as long as they are in the stomach, and the insoluble preparations become dissolved by the action of the gastric juice; but as soon as they have passed into the duodenum, the alkaline bile precipitates them at once, and renders them insoluble again. Hence through the greater part of the entire intestinal tract they act as totally inert matters, and are finally rejected with the rectal discharges.

It is different, however, with the phosphates of potassium and sodium, which are equally soluble in acid, alkaline, and neutral menstrua; they remain dissolved during their entire passage through the digestive channels, and are consequently resorbable.

The absorption of phosphates of lime is by no means indispensable to the explanation of the formation of osseous tissue. We can logically presume that the soluble salts of lime alone are absorbed, which precipitate neither in acid nor an alkaline medium.

These salts meet, in the deeper channels of the economy, the phosphates of sodium and potassium, arriving with the same conditions of solubility, and form thereby double decomposition phosphate of lime.

Resorcin in Eczema.

DR. H. P. CHACE thus writes in the *Therapeutic Gazette:* I wish to call the attention of your readers to the use of resorcin in eczema. In the April number of the *Gazette* I saw a report from Dr. Wyss, taken from the *Fortschritt*, of his use of this remedy. I had at that time upon my list two cases of general eczema that had defied the whole range of eczema remedies. One case was about six months' standing and the other four months'. Both persons had been subject to this disease for years, at times. One of my patents having had it several years

ago continuously for fifteen months, was seen by two New York City specialists, and finally went to Europe and consulted the famous Erasmus Wilson. I go into this detail to show that the case was of the obstinate type. The attack for which I was attending him had lasted about four months. The eruption extended over every part of his body, except from the knees down. The scrotum was swollen to three times its natural size; the face and eyes swollen very much, and, as may be imagined, the itching and burning was intolerable.

My other case was but a repetition of the one I have described, except that the eruption completely covered the body at times, and would then get a little better in some places, but in a short time returning with renewed force.

After reading the article referred to, I immediately ordered from my druggist the following:

℞. Resorcin . . . . . ʒij.
Glycerin, q. s. . . . . ʒij. M.
Sig.—Apply with camel's-hair pencil morning and evening.

I had very little faith that my patients would receive any benefit from it, but to my great surprise, the remedy worked like magic. Improvement was marked in forty-eight hours, and in one week both of my patients were attending to business, and are both at this writing perfectly well. Since then I have had sent me one other case of general eczema, and six cases that were localized, the remedy proving just as efficacious in every instance except one. In one case the lady could not follow my directions about keeping her hands out of water. In this case the hands are very much better, but not yet entirely healed.

I see in a report from the Dermatological Society, Dr. Stelwagon, Philadelphia, claims resorcin is rarely of benefit in this disease. I cannot help but feel that the doctor has not given it a thorough trial, and believe, if used properly, it will prove a blessing to both patient and physician.

The Use of Sedatives in Insanity.

In the *Practitioner*, September, 1886, Dr. SAVAGE contributes a most valuable paper on the use of sedatives in insanity. The old practice of restraint by means of chain, cord, or whip was most barbarous, and the practice of producing quiet by means of narcotics is most strongly condemned. The principle of controlling patients by means of drugs will continue to be used by general practitioners until the public overcome their prejudice against asylum treatment. In nearly every case the history is the same. Sleeplessness and depression are tried to be overcome by opiates, or it is attempted to subdue violence and restlessness by narcotics. Something must be done if the patient be treated at home, and it is on this account that the author enters upon the subject of drugs in insanity, giving his experiences when they may do good and when they are harmful. At the Bethlehem Hospital such drugs as the bromides, morphine, chloral, and opium, are seldom if ever used. In studying the treatment of mental disorders by means of sedatives, it must be remembered that two very opposite conditions give rise to mental disturbances: in one the brain is the chief cause of the disorder, in many cases the evil being organic decay of this organ; in other cases the mental disorder is functional, and may be due to bodily disease reacting on

the mental processes, or to perversion of the senses and allied disorders of intellectual processes. In cases of brain decay you must be careful not to begin with large doses; in functional disorders you must sometimes not be afraid to give large doses, for in functional disorders of the mind profound impressions produced by therapeutical or accidental circumstances may effect wonders. In these cases the old term "alterative" has some meaning. In some functional cases, a whitlow, or a toothache, a severe attack of diarrhœa, or sickness, may cause relief, and in the same way a blister or a seton, an emetic, or a powerful sedative, may effect a similar result. The author does not believe in treating the symptoms of insanity as if they each had a definite meaning. Sleeplessness may as often be removed by a stimulant as by a narcotic. Bromide of potassium is supposed to be the strongest remedy we have for nervous excitement, and in some cases of restless excitement it is very useful, if given in doses of twenty grains three or four times a day; it is most useful in young cases belonging to nervous families, especially those who complain of vague uneasy feelings in the head. In cases of sexual perversion of one kind or another, bromide is very useful. In young men and women, with a tendency to commit suicide or be violent, a dose of from twenty to forty grains at bedtime has good effect. Any tendency to epilepsy is often treated by bromides, but here frequently the number of fits is reduced at the expense of harm to the mind. Bromide is generally given in combination with chloral, and the author's experience is that they do no good. In the sleeplessness of the early stage of puerperal insanity it is well to try them, and they may tide over a dangerous time; but if rest be obtained at the expense of appetite for food, more harm than good is done. Dr. Savage lays down this law: if sufficient food be taken, bromide or bromide and chloral may be pushed in cases of mental excitement. Objection is taken to chloral because it soon disturbs digestion; but in cases of acute delirious mania, if given with abundance of food and stimulants, it will save many from death.

Large and Small Doses of Iron in Anæmia.

Dr. Frederick Willcocks thus writes in the *Brit. Med. Jour.*: In a series of observations on clinical hæmometry, carried out in conjunction with my late friend Prof. E. Buchanan Baxter, published in 1880, we pointed out the discrepancy which existed between some of our own results in chlorosis, when treated by iron, and those which had been previously recorded by Hayem and Malassez. These authorities laid it down as a general principle that iron always augmented the richness of the corpuscles in hæmoglobin, but that their number did not follow a parallel course; it might vary but little, and not unfrequently underwent actual diminution. We found, however, that the numerical increase might proceed very rapidly at first, and then more slowly, and that at this stage the corpuscles began to grow richer in hæmoglobin. This subject has been brought into some prominence in the *British Medical Journal* by Dr. Strahan's paper on "An Unrecorded Danger from continued Large Doses of Iron," read in the section of Pharmacology and Therapeutics, at the Brighton meeting, and published on September 18th. The paper of Dr. Laache's, from which Dr. Strahan quoted, was originally read in the Section of Medicine at the International Congress at Copenhagen (1884), and was a review of recent observations on blood corpuscles in anæmia and leukæmia, including references to Dr. Laache's own work and that of others

In a subsequent series of cases of chlorosis, in a paper on anæmia to the *Practitioner* in 1883, I endeavored to prove, among other points, that these apparently conflicting results depended mainly on the different dosage of iron employed. Under the section "Large and Small Doses of Iron in Chlorosis" (*Practitioner*, Vol. xxxi., p. 95, etc.), it was shown that large doses of iron, as Bland's pills, ferrum redactum, and the like, simultaneously increased both the number and the hæmoglobin value of the red globules in the blood; the influence of small doses, on the other hand, was directed mainly to the increase in the number, the average hæmoglobin value of the individual corpuscle remaining constant, or even undergoing diminution at first. On the smaller dose of iron the process of repair more nearly resembled the natural mode of blood-regeneration, as after hæmorrhage, when the increase in the number of the corpuscles precedes their rise in physiological value. Young and feebly-colored elements first appear in the blood, and these subsequently assume hæmoglobin. The sequence of events is, in a sense, analogous to the formation of etiolated chlorophyll bodies within the protoplasmic utricle of the plant cell, in the absence of light, or in the absence of iron from the soil. These corpuscles are at first almost colorless, and can only attain their true functional distinction later, under appropriate conditions.

It is to the latter of these observations of mine, on the influence of small doses of iron in increasing primarily the number of the red corpuscles in the blood, that Dr. Laache refers in his *résumé* in the *Deutsche Med. Woch.*, October 23d, 1884. The difference of action between large and small doses of iron, shown in my numerations and estimation of the hæmoglobin in chlorotic blood during recovery, seemed to me, as was mentioned at the time, to satisfactorily explain the well-recognized clinical fact of the value of giving large doses of iron, from the outset, in all cases of chlorosis, and of continuing them for some time to avert relapse (*Practitioner*, 1883, vol. ii., p. 98). On the smaller or less easily absorbed dose, the two phenomena—of rise in number and of rise in the functional value of the corpuscles—occur more or less in succession, and hence the relative hæmoglobin value of the individual corpuscle does not reach its average normal standard until some time after the number has attained its highest limit. A rapid hæmatinic effect is therefore best brought about in chlorosis, by giving a large dose of iron from the beginning of treatment.

It is possible that this peculiar hæmatinic influence of small or less easily absorbed doses of iron had been previously overlooked, from chlorosis being almost invariably treated on the continent with the large doses of Bland's pills recommended by Niemeyer. The rise in the number was, in consequence, not distinguished from the coincident rise in the hæmoglobin value of the red corpuscles.

Rabuteau's Dragees of Iron.

Iron, says the "Progrès Médical," is one of the most important principles of the organism, and the only metal the presence of which is indispensable to the maintenance of life. It exists in all parts of the system, but nowhere does it acquire such importance as in the blood. (Hayem, "Recherches sur l'anatomie normale et pathologique du sang;" Leçons de thérapeutique faites à la Faculté de Médecine de Paris.) The blood of a person in good condition contains about forty-five grains of iron; when this amount is diminished, a decline takes place—the

appetite fails, the strength is enfeebled, and the blood loses its fine natural color and qualities[1] In a great number of diseases, such as anæmia, chlorosis, hæmorrhages, debility, etc., it sometimes happens that the blood has lost half its iron, and, to cure these diseases, it is absolutely necessary to restore to the blood the iron which it lacks. The problem has been to find a preparation of iron in the proper form for penetrating into the organism without unduly taxing the digestive tract or interfering with the essential qualities of the gastric juice. (Ch. Richet, "Du suc gastrique chez l'homme et les animaux," Paris, 1878.) Dr. Rabuteau ("Traité de thérapeutique et de pharmacologie," Paris, 1884) has solved the problem by preparing dragées containing iron in such a state that it is unnecessary for the stomach to act upon it before it enters the circulation. Each of these dragées contains exactly twenty-five milligrammes (about four-tenths of a grain) of a chemically pure ferrous salt. The ingenious apparatuses devised by Potain, Hayem, and Malassez for examining the blood microscopically (Robert Moriez, "La chlorose" (Thèse d'agrégation), Paris, 1880), have enabled physicians to study the therapeutical value of Rabuteau's iron. Among the observations that have been published on this subject the following is full of interest: A young girl, profoundly anæmic, entered Ste.-Anne's ward in the Necker Hospital. On the 4th of December her blood, examined by Professors Potain with the *compte-globules*, contained only 2,919,000 red globules to the cubic millimetre, the normal average being about 4,500,000. She took two of Rabuteau's iron dragées every morning and evening with the meals. Succeeding examinations up to the 24th of December, the date of her discharge, gave the following results:

	Number of red globules to the cubic millimetre.
December 4th (date of admission)	2,919,000.
" 7th	3,486,000.
" 12th	3,696,000.
" 24th (date of discharge)	4,578,000.

The patient had therefore gained 1,659,000 red globules to the cubic millimetre in twenty days, an average of 82,950 a day. A cure had been attained, the normal number of globules having been acquired, a little less than 5,000,000 to the cubic millimetre in women. It should be added that during the whole course of the treatment the appetite was excellent, and there was neither diarrhœa nor constipation. So precise an observation demonstrates that in chloro-anæmia Rabuteau's iron regenerates the diseased red globules of the blood with a rapidity not before observed under the use of other ferruginous preparations; it adds to their physiological power, and makes them richer in coloring matter. Moreover, being neither styptic nor caustic, and having no coagulating or astringent action on the gastro-intestinal mucous membrane, this preparation of iron causes neither constipation nor diarrhœa; as it does not need to be digested in order to be absorbed, it does not give rise to the sensation of weight in the stomach, or the gastric pain and indigestion occasioned by other preparations. The therapeutical effects are rapid and energetic. In women who have not menstruated for many months the amenorrhœa disappears; in others suffering from an anæmic state of long duration, grave in proportion as the ordinary preparations of iron

have not been well borne, Rabuteau's dragées, four daily, soon restore the digestive functions to their normal state. Such must be the case, since this preparation of iron does not require the intervention of the gastric juice to be rendered assimilable. In grave cases of chloro-anæmia, where the gastric juice is very deficient in hydrochloric acid, the effects are remarkable. Finally, comparative experiments and clinical observations made in the Paris hospitals have shown that Rabuteau's dragées are used with success in all cases where iron is indicated. Two should be taken morning and evening with the meals.

Sandalwood Oil as an Anti-Blennorrhagic.

The *Boston M. and S. Jour.* says: According to Jaccoud's *Dictionaire Pratique*, that which renders the sandalwood oil valuable, outside of the rapidity and efficacy of its action as a blennorrhagic, is that the drug, far from producing upon the stomach and upon the urinary passages the unpleasant effects of copaiba, is perfectly inoffensive and even agreeable, . . . in place of fatiguing the stomach and occasioning regurgitation . . . it stimulates the digestion and possesses a stomachic action without provoking any trouble of the digestive functions. Elimination by the skin never causes an exanthem, and the author of the article adds to these negative virtues very positive attributes in most diseases of the urethra and bladder, so that one is reminded of the historical writers of his boyhood in which the hero of the story is possessed of an unfailing perfection, and his enemies of equally great failings.

In the *Annals of Surgery* of a year ago, was an article which extolled the drug in epididymitis, and mentions its value in gonorrhœal rheumatism. At the recent meeting of the Society for Internal Medicine in Berlin, a paper on the drug was read by Dr. Posner, and debated by several gentlemen, in which valuable properties were ascribed to the drug in cases in which injections were improper, namely, those in which the disease manifested its passage beyond the compressor urethræ muscle by inflammation of some of the adjacent organs, as the prostate, bladder, or testicle. It seemed to be the opinion that under all circumstances sandal oil was better borne than the other balsamics.

The report of Posner and the discussion calls out a broadside from Dr. Letzel, of Munich, who makes a very genuine addition to our knowledge of the drug.

Dr. Letzel reports, from his clinic for skin diseases and syphilis, an abundant and carefully observed series of cases in which sandal oil has been administered for gonorrhœa or some of its complications.

During less than a year past Letzel has used sandalwood oil on gonorrhœal patients ninety-seven times. The drug was given at first in an emulsion with burnt coffee and cinnamon water, but patients had such an aversion to the mixture that capsules were substituted. Decided disturbances in the digestive tract occurred in four out of the ninety-seven patients, twice decided diarrhœa, and twice severe dyspepsia, which lasted many days. Burdensome eructations, oppression and burning in the stomach, and a marked feeling of thirst, were often noticed, but of transient nature which did not necessitate the abandonment of the drug. Five times occurred congestive pain in the region of the kidney, which reached such intensity in two cases that the subcutaneous use of morphine was necessary. Letzel then quotes from the second edition of Jullien to the effect

that many patients complain of a painful sensation which occurs thirty to forty-five minutes after the injection of the remedy, and radiates through the loins and even to the testicles, and that there is no trouble to which sandal oil gives rise more frequently than this congestive pain in the lumbar region. Jullien describes also an erythema from the drug, probably the only reported eruption from sandal oil.

Letzel sums up his experience in the following conclusions:

In the beginning of a gonorrhœa sandalwood oil influences the secretion in such a manner that after a few days the discharge becomes decidedly less, and instead of a greenish-yellow color appears only somewhat milky. The pain in urination and erection decrease faster than by indifferent treatment, and disappear freely in a few days. Of forty-two cases so treated, thirty-seven were influenced in the manner noted. In the seven remaining cases, the influence of the sandal oil on the gonorrhœa was not noticeable.

If after ten or twelve days the use of the oil is abandoned the disease grows worse in most cases. The use of sandawood oil gave the best results when it was begun in the third or fourth week of the disease, and when accompanied by a slightly astringent injection. Three out of twenty cases of this class healed without any injection in two or three weeks. In twenty-one cases out of twenty-nine, the excretion, disappeared within eight to twelve days, and were ended with an injection. Eight patients in whom a favorable result was not reached were indolent, careless tramps.

In gonorrhœal cystitis and prostatitis the exhibition of sandal oil was of great use in all cases. The length of the affection was decidedly shortened, and the suffering greatly diminished.

Chronic gonorrhœa was not noticeably influenced by the drug alone, though local medication seemed to act more favorably with simultaneous internal administration of the oil.

"All in all, sandalwood oil modifies the secretion with decidedly greater promptness and surety than the other balsams, but the stomach does not endure the drug so lightly as most authors are inclined to believe, and further, the eventually occurring congestive condition of the kidneys warns us to greater care, and the last great defect in the drug is its too great expense."

The Therapeutic Uses of the Hot Bath.

Dr. W. J. NOLTEY thus writes in the *Lancet*, November 13: The application of heat in various ways to the surface of the body has long been recognized as a remedial agent of no small power, and the hot-air and vapor baths are often resorted to, either by the advice of the medical man or empirically, from a knowledge of the good results previously obtained from them. By those who have written on the subject, the effects of these baths are ascribed almost entirely to their action on the skin; and if any more remote influence is attributed to them, it is mainly through the skin as an organ of elimination that this influence is believed to be brought about. The hot-water bath, on the other hand, is usually regarded with dread, and persons who are advised to take a warm bath are commonly enjoined with the greatest earnestness not to allow the attendant to have the water in the bath at a higher temperature than 98° or 100° F. It is no doubt

a wise precaution to warn those who are the subjects of serious cardiac diseaes or of any profound circulatory derangement to guard against too hot a bath or too long a continuance in a bath of any kind whatever; and we caution such persons with equal earnestness against anything that may put a great or sudden strain upon the heart or arterial system. In such cases we prohibit football, and running to catch a train, an omnibus, or a tram-car; but it does not follow that people whose vascular systems are ordinarily sound may not indulge in these pleasures, if pleasures they are, to their heart's content; while to a great many of those whose muscles become weak and flabby from want of use, a good deal more running and jumping than they usually get would be beneficial in the highest degree. In the same way, it has appeared to me that persons suffering from various disorders, always excepting those above mentioned, may take a hot bath without danger, and in many cases with great advantage to themselves. By the hot bath I mean, in the case of the wet bath, one at a temperature ranging from 100° to 110° Fahrenheit. In the dry-air bath a temperature much higher than this can of course be borne.

Some time ago an opportunity was afforded me of making some observations on the effect of the hot bath in removing some morbid conditions of the system. A man of middle life, in temperament nervous-sanguine, spare, and somewhat below the average height and weight, complained of languor, debility, want of energy, and lowness of spirits. On examination it was found that his heart and arteries were sound, though his circulation was rather weak. His alimentary system was fairly good, though the quantity of food taken was below the average. His skin was somewhat dry, and a few spots of psoriasis were found on the extensor aspects of the legs, arms, and trunk. His urine was cloudy with phosphates, and below the average in quantity. As the Turkish bath was not in this case available, he was advised to take a water bath at a temperature of 105° F., and directions were given how to proceed in case of faintness. The day after taking the bath his condition was wonderfully improved. His circulation was stronger, his urine was clear, and he now felt cheerful and well. This improved state of matters continued for about twelve days, when all the unpleasant symptoms reappeared, and he began to feel as ill and dejected as ever. The most natural proceeding was, of course, to order him another bath, and this he took with the same happy result as before. Since that time he has had the hot bath about once a fortnight, and by this means has managed to keep himself in very tolerable health and spirits.

It would be interesting to know the exact means by which the hot bath produces this powerful and beneficial effect on the system. It must, in the first place, be carefully borne in mind that the warm bath at a temperature below 100° F. has no influence that can be compared with the results to be obtained from the hot bath. The hot bath stimulates the whole system, and the effect of this stimulation appears to last for some time, for the patient above referred to remained well for about a fortnight after taking the bath. Having ascertained that his diet was as nearly uniform as possible, the quantity of urea excreted on three successive days immediately before and after the bath was estimated by Russell and West's method, with the following result:

Average quantity of urine in twenty-four hours for three days *before* the bath	916.67 cc.
Average weight of urea in twenty-four hours for three days *before* the bath	22.8 grms.
Average quantity of urine in twenty-four hours for three days *after* the bath	1040 cc.
Average weight of urea in twenty-four hours for three days *after* the bath	26.25 grms.

From this it appears that the quantity of urine and the weight of urea excreted were below what are usually stated to be the averages for a healthy man, but that both were very preceptibly increased by the hot bath. If we may assume that the other secretions and excretions were proportionally increased, then we have clear evidence as to the proximate cause of the improvement brought about in the general condition of the body. Perhaps we may compare the action of the hot bath with the action of any other irritant of moderate severity. The theory of counter-irritation is confessedly somewhat hazy and inadequate: but it is a matter of every-day observation that a moderate stimulation of the skin relieves congestion of internal organs immediately subjacent to the area of stimulation. In many cases there is only a remote connection between the vascular supply of the viscera so acted upon and the portion of skin stimulated. It must be by a reflex action of the nervous system that a poultice over the loins can relieve congestion of the kidneys, or one on the skin of the chest can benefit a similar condition in the lungs. It is not unreasonable to suppose that there is some sort of connection between the centres presiding over the vascular supply of any portion of the body surface and those regulating similarly the quantity of blood proceeding to the organs lying immediately beneath. Thus a stimulus applied to any portion of the skin would lead to an increased activity of the nerve centre presiding over this area of the body surface, and so relieve any existing congestion of the connected or contiguous centre governing the vascular supply of the viscera lying in the neighborhood of the stimulated surface. I think it was Dr. Berry Hart, of Edinburgh, who first suggested this explanation of the action of counter-irritants. In this way, then, the hot bath would relieve congestion of many centres, and by restoring them to a healthy action would promote the circulation of healthy blood not only through the thoracic and abdominal organs, but also through the higher nerve centres, thereby leading to the dispersion of those morbid feelings conjured up by the faulty nutrition of the cerebral convolutions. Whether this be really the mechanism by which the good effects described above are produced, or whether some other explanation can be given, it seems clear enough that the hot-water bath might be used, with proper precautions, in many cases difficult to treat in any other way, such as chronic gastric catarrh and the protean forms of dyspepsia. One of the most marked effects of the hot bath is seen in the increased force of the circulation, and following necessarily from this an increased degree of muscular energy, with a corresponding increase of activity in the mental functions. In short, the flagging energies are restored and a more healthy tone is given to the whole system.

As in most remedies, so in the case of the hot bath, the time and manner of application are of some importance. Like all other baths, the hot bath should

be taken before the principal meal of the day, and if this meal be taken early the good results will be more certain than if it be taken late. The duration of the bath should be about fifteen minutes, and the temperature should be about 105° F. If faintness should come on while in the bath, the whole head should be immersed in the hot water, and kept there for a few seconds, when the faintness will disappear. The usual directions given in public baths are to get out of the bath as soon as drowsiness or faintness begins and to ring for the attendant; but any one who attempts to do this will most certainly aggravate his danger. As pointed out some time ago by Mr. Benham and subsequently by myself, the applicatiou of heat to the head is a potent means of averting syncope. From time to time we hear of deaths in the warm bath; and I am convinced that many of these might have been prevented by the adoption of the simple method referred to, instead of the deadly and often impossible means commonly recommended.

A Lecture, Entitled A Therapeutic Retrospect.

The *Brit. Med. Jour.*, Nov. 6, says that M. CHARTIERS, M. D., in the opening lecture to his class, after a few introductory remarks, directed the attention of the students to a "Therapeutic Retrospect" extending over nearly twenty-five years. He stated that, like most graduates who attended the instruction of Professor Hughes Bennett, he left the University of Edinburgh believing little in the medicinal treatment of disease. Referring to the influence of Dr. Bennett, he stated that: "He was a man gifted with a rare fluency of diction, with a strong controversial spirit, and with a great hatred of shams. He loved to pulverize the old tenets of therapeutics. He lashed with ridicule the blood-letting and mercurial treatment of inflammation, and stood in triumphant scorn on the ruins he had made. He was by every one recognized as an excellent clinical teacher, a wonderful bedside instructor, and students trusted him as men only do once in their lifetime. And yet he was wrong in many of his arguments, wrong in much of his practice; and the principles he implanted were proved false by the experience of the present day." "The prospect was dreary then, but things have now greatly changed for the better," he continued, "as I shall attempt to show you by examples of present treatment in

"1. General diseases.

"2. Diseases connected with different systems of the body."

1. GENERAL DISEASES.

Rheumatism is a general disease. It cannot be referred to any one part. It invades all tissues. It encroaches on every system. It is a plain disease. Its features do not change, and it is indicated by signs certain, typical and characteristic. The chill, the fever, the swollen joints, the excessive pain, the sour-smelling perspiration, have been ever recognized by observers; and, though seldom fatal, it has been acknowledged in all medical treatises as a malady which, by its sequelæ, often shattered the active and useful life of peasant and artisan.

Its treatment has been shifting, marked by a succession of vaunted cures, which time showed to be vain and futile. By happy chance, at first, in interpreting nature, and by careful observation afterwards, Dr. Maclagan, a few years ago, intimated to the profession the antidote for rheumatism.

He saw where ague develops, in primeval forests, there also the stately cinchona grows. Rheumatism, as a rule, attacks those who live where the soil is wet, where the damp is great; and in such positions, also in wayside places, in marshy ground, and by sluggish streams, the graceful willow bends.

So-salicin, obtained from the willow, Dr. Maclagan imagined, might cure rheumatism; and he was right, for all experience shows its action is as certain in that fever as quinine is in ague.

Let us turn now from this typical general disease, to look at some of those ailments which attack the system, into which the body has for convenience been divided.

II. Diseases Connected with Different Systems of the Body.

A. *Diseases of the Respiratory System.*—A man is exposed to cold. A stitch settles in the side. The temperature rises. The hurried breathing, the rusty expectoration, the marked crepitation, betoken inflammation of the lung, and we know by these and other signs that the patient has pneumonia. Disease here marches rapidly. What is to be done? Twenty-five years ago the answer by some was, "Bleed, and the patient will recover." By others, "No. Bleed, and the patient will die." These views were pronounced, and they were antagonistic. They emanated from high authorities, and, in reflecting on them, it is little to be wondered at that the medical student of that time was bewildered and confused, and, in very helplessness, slid into an expectant treatment, waiting for something to turn up.

Now, the line of therapeutics seems clearly marked out, varying only with the varying condition of the patient. This being rightly apprehended, it is distinctly shown that in some cases of pneumonia a depressant antimonial treatment is advisable, while in others a stimulant method is necessary. Thus, by a careful selection of medicines and of diet, a successful issue may be predicated in the great majority of cases of lobar pneumonia.

B. *Diseases of the Circulatory System.*—The man who is ill with heart-disease has symptoms very painful and very typical to indicate its seat. He lies propped up in bed; his face is anxious, his countenance pale; sleep cannot be won, for the laboring heart affords no anæmia to the wearied brain. "I am tired and worn," says such an one; "may the end come, and that speedily." But yet, grave though the surroundings are, our efforts are not unavailing. We may relieve, though we cannot cure. We can give little resting-places from suffering to him who is staggering under life's burden, by the aid of digitalis and other cardiac tonics. We thus do good, and, from fitful spurts of activity, we bring the organ to a similitude of the steady beat of health.

C. *Diseases of the Digestive System.*—Dyspepsia is the quack's emporium; advertisements of stomach and liver-pills evince this. With ingenious force and reiteration they excite alarm and proclaim a remedy. Fortunes have thus been made from a credulous public. Strong assertions, backed by active medicines of an unknown yet powerful cathartic character, will always find people ready to pay for the vendor's wares. While this is the case, I believe the patent medicines bearing on digestive derangement have had their day. We, in this country at least, are becoming more temperate. We live more on recognized and health-producing rules. We know that a careful dietary, abundant exercise, regular

hours for sleep and work, will tide a man onwards to a green old age. The recent researches as to our various beverages—tea, coffee, cocoa, and alcohol—have been of infinite value, and solved many vexed questions. Yet, at times, medicines are necessary, more especially those which have a cholagogue action, and of these mercury has regained the reputation it for some time had lost. In the crusade against antiphlogistics, mercury fell maimed and crippled; men asserted that it was the direst curse of humanity. Some said, "Banish it from every pharmacopœia;" others, "place it in the museum of therapeutics." In common, everyday life, a good name may be smirched by abuse; but yet, if the accusation is untrue, the man or woman will rise, even in their lifetime, pure and clean in the noonday heat of public opinion. So also has it been in therapeutics with mercury. It is now recognized to have a decided action in eliminating bile. The jaundiced eye becomes clear, the peevish temper and the splitting headache disappear under its judicious use; further, we know, externally, it stands now, in corrosive sublimate, as the first favourite in antiseptic dressings.

Moreover, we were trained to believe that all the horrors of syphilis in the middle ages, the necrosed jaws, the toothless gums, the cachexia and anæmia of a sapped constitution, were due more to mercury than to the disease for which it was given. We were instructed to lean on iodide of potassium, fresh air, and tonics, and this opinion of physicians was fortified by the high authority of Syme, with whose name the greatness of the Edinburgh Medical School will ever be entwined. It was a sore wrench to find that the means indicated were simply pottering with the disease mentioned, and, if success was to be gained, we had to resort to the much-abused drug in which our forefathers trusted.

D. *Diseases of the Nervous System.*—We can percuss, listen to and understand, by care and attention, the diseases of other systems; but the brain, with its convolutions, we cannot in life see or handle. Hence it is that the nervous system has to some extent been a *terra incognita*, and many theories, fluctuating and crude, have swept across the field of cerebral pathology. Yet, rays of light are now shining on the darkness. Ferrier's able researches have been utilized, and a bright page is now opening up at the present moment in surgical operations on the seat of reason and will. It is refreshing to read how, in some cases, the nidus of epileptic attacks has been carefully diagnosed, and relief given to sufferers from a distressing and enfeebling malady. If we consider hydrophobia a disease of the nervous centres, we must admit Pasteur's discovery, now, I think, fully proved, as the most important epoch in the therapeutics of this century. He has succeeded when all other means had failed. He has rescued a dreadful and awful malady from the pale of incurable disease. These results are the best criticism to those who sentimentally urge the present continuance of the abolition of all original research in this country.

Electricity has spanned continents and bridged oceans, and by it we are in familiar momentary intercourse with all the centres of the world's activity. Its utility in grave affections of the nervous system is very doubtful, but it has a prophylactic influence which cannot be gainsaid. Thus, early symptoms of failing physical powers due to nervous derangement, may be arrested, and average health retained. Judiciously used, also, this influence gives refreshing intervals of repose to those who are stricken with paralysis, or are afflicted with a disease which can only terminate in death.

Pharmacopœia of 1885.

We have welcomed into the new *Pharmacopœia*, after their worth had been verified, some important remedies; and by doing this, official sanction has been given to new modes of treatment. By the discovery of the anæsthetic local properties of cocaine, the surgeon can, in delicate operations on the eye and on the throat, use the knife with painless certainty. The kidney burdened with congestion can be relieved by the vicarious perspiration resulting from pilocarpine; alarming hæmorrhage can be arrested by the injection of ergotine; and habitual constipation in many cases cured by cascara sagrada. A direct and sure method of attacking psoriasis is ensured by the ointment of chrysarobin, and the same drug given in small doses internally checks, according to some late researches, the acute stage of eczema.

The Committee of the *Pharmacopœia* have also acted well in expunging several obsolete medicines, and have exercised a wise discretion in not admitting into the officinal rank substances which, though loudly advocated, had no genuine title for admission.

Health-Resorts and Climate.

When the *Pharmacopœia* fails, we can supplement it by other means, for the resources of the physician are not exhausted. Nature is a wonderful restorer of lost health. From great depths, in some cases dependent on volcanic forces, there springs up in favored places earth's remedy for some human ailments. Pure and sparkling with surcharged gas, this pleasant beverage can be retained by the stomach without heaviness or nausea. The salts contained are thus easily assimilated by the system, and the glow of health in time mantles on the countenance of the invalid.

These places were at one time scoffed at by those who had never seen them, but a better appreciation of their worth has dismissed this feeling. Facts are things that "winna ding," and these evince that when the wisdom of Cavendish Square and Harley Street fails to relieve gout, sufferers can be successfully ordered to drink the famed Elizabethen of Homburg, the effects of which are aided by climatic influences and by the cool breezes of the Taunus Mountains. So also the crippled joints become supple under the warm waters of Wiesbaden and Bath, and rheumatic pains disappear with the tepid neutral springs of Wildbad and Buxton. When the syphilitic poison has lurked long in the system, there is no agent so potent for eliminating it as the sulphur contained in the spas of Aix-la-Chapelle or Neuenahr.

And for the man tired with business or wearied with the toil of literary work you can recommend with confidence the breezes of the Atlantic. There, on a well-appointed and efficiently-manned steamer, every comfort is secured and a tonic is imbibed, freed from land surroundings and cares. No letter has to be answered, no proof-sheet has to be corrected, no telegrams arrive, and no duns harrass. There is rest, complete rest, and a man becomes, as it were, a child in his hopes, amusements, and his pursuits. A sea voyage is charming when the barometer is high, and when the waves, glistening in the sun's rays, or silvered with the sheen of the moon, lap the vessel with the kiss of friendship. And when the scene is changed, when the storm arises, the winds roar, and the sky is black

and leaden, yet, even then, the immensities of the ocean teach us lessons of our littleness and feebleness, and reveal the greatness of Almighty power.

Dr. Charteris concluded by saying: "I have shown you progress, be it yours to advance this. Be enthusiastic; believe in the tools of your life's work; assume not the skeptic's mantle; a skeptical young physician requires to alter his ways before he can be a trusted senior. You have enlisted in the ranks of a noble profession; guard its honor as you would guard the repute of your mother's name. Remember the words of Thomas Carlyle: 'Often I have said, what profession is there equal in true nobleness to medicine? He that can abolish pain, relieve his fellow mortal from sickness, he is the indisputably usefullest of all men. Him savage and civilized will honor. He is in the right, be in the wrong who may. As a Lord Chancellor, under one's horsehair wig there might be misgivings; still more as a Lord Primate under one's cauliflower; but if I could heal disease, I would say to all men and angels without fear—*En, ecce!*'"

IV. GENERAL MEDICINE.

Cholera in Japan.

Some history of cholera in Japan has recently been published by the Director of the Sanitary Bureau for the empire. According to this authority cholera is known to have appeared in Japan in 1822, commencing at Nagasaki, the only port then open to foreign commerce; and at the same time the disease is known to have prevailed in China. Another epidemic took place in 1858, but no statistical information is available as to either of these outbreaks. But since the empire has been freely open to foreign vessels cholera has been much more frequent. It entered in 1876, and in 1877 it caused 7697 deaths. The next epidemic was in 1879, when 105,786 fatal attacks were recorded. After this there was a cessation until 1885, during the course of which 7152 deaths occurred; and the disease has extended into the present year. Cholera is admitted to be, in Japan as elsewhere, generally associated with the prevalence of local filth, and great efforts are being made by the Sanitary Bureau to effect improvements in this respect. Cleanliness, coupled with certain limited quarantine restrictions and the removal of the sick to hospital, are the main remedies relied on.

Further Researches on Cholera.

The epidemic of cholera which has been prevalent in the north of Italy during this year has offered the occasion for the study of the disease, which has been made by Drs. TIZZONI and CATTANI of Bologna, the results of whose researches are contained in a recent number of the *Centralblatt für Med. Wissensch.* It is interesting to find that Koch's researches are confirmed and extended. The authors' chief conclusions are contained in the following propositions:

1. The bacilli which were present corresponded in biological and morphological character with those described by Koch, Ermengen, and others as the comma bacillus, and they were constantly present in the twenty-four cases examined.

2. They were found in the alimentary canal and the dejecta, and were capable of cultivation, so that when present in small numbers this method permitted their presence to be ascertained with greater certainty.

3. Of these twenty-four cases in which the bacilli were found, one was a case of prodromal diarrhœa, and three were cases of cholera typhoid, which succumbed respectively on the sixth, seventh, and fifteenth days.

4. That the comma bacillus is of the utmost importance for the differential diagnosis of Asiatic cholera.

5. Even after large doses of calomel, quinine, thymol, and ethereal extract of male fern, bacilli were found in the intestines and dejecta, capable of cultivation. The bacilli were found in the vomit and contents of the stomach in several cases,

and were capable of cultivation. In a case where they were absent the vomit was sour.

6. The blood-serum taken during life from the arm and in the cadaver from the right heart was always alkaline.

7. The bacilli were present in the serum and in the white blood corpuscles in small quantities, but were incapable of cultivation.

8. The subarachnoid fluid, which is much increased in cholera, also contained them, but only once was a successful cultivation obtained, when the weather was warm and the necropsy was made about two hours after death.

9. The comma bacilli are capable of multiplication and growth not only in the soft parts of fruits but also on the "skins."

10. Flies probably play an important part in the propagation of the disease, as they were found to be capable of conveying by their feet the microbe from a cultivation to a suitable medium, and flies removed from the wards and "cultivated" gave a crop of micro-organisms, among which the comma bacillus was predominant. The importance of the results here categorically stated is obvious, as a confirmation of many points which had been previously ascertained; but we should like to call attention to one fact which has a practical bearing—viz., the incapability of the bacillus to live in an acid medium, such as the gastric secretion, in times of health. Assuming this fact to be true, and that the chief mode of entry of the bacillus is by the digestive organs, it is obvious that it can only affect the body when the acidity of the stomach is very much lessened or reduced to *nil*, so that it behooves every one in times of the epidemic to exert more than usual care to prevent any disturbance of the functions of the stomach or the lower alimentary tract, and to abstain from succulent fruits, which, besides the property they possess of deranging the alimentary canal, can also act as direct means for the introduction of the bacillus.

Absorption by the Skin.

The *Brit. Med. Jour.* says: Much controversy has raged round the question of the capacity for absorption possessed by the skin, and its suitability as a medium for the administration of remedies. Not only have the results of experiment been, to a large extent, conflicting, but the validity of many of the experimental methods employed has been called in question, and in some cases, at least, with much apparent justification. We propose to glance briefly at the question from four different points of view, and to consider the capacity of the skin for absorbing: first, simple fluids such as water or milk; secondly, non-volatile salts dissolved in a fluid menstruum; thirdly, volatile salts and gases; and lastly, metallic salts, vegetable alkaloids, etc., applied by inunction.

It seems now ample proven that the skin has a very limited power of absorbing simple fluids such as water or milk. Such fluids can, indeed, be taken up to an appreciable extent by the superficial layers of the cuticle, but they are subsequently lost by evaporation, rather than absorbed into the blood-vessels or lymphatics. The elaborate weighings which have been made to show that the body gains weight after prolonged immersion are really valueless (even if the results obtained were constant instead of being highly conflicting), because the alleged gain can be plausibly explained as the result of the check to the cutaneous secre-

tion. It is credibly related that shipwrecked sailors in the tropics, when destitute of water, have found great relief to thirst from bathing in the ocean, and hence it has been rather hastily concluded that water is absorbed by the skin. More probably the relief is the result partly of diminished transpiration and partly of the cooling of the skin. It is popularly believed that life may be maintained for long periods by simply immersing the body in milk, and hence the deduction that milk is absorbable by the skin. There is no satisfactory evidence to justify this belief, and it must be remembered that conclusions drawn from all such experiments, even if otherwise unimpeachable, are liable to be invalidated by the accumulating proofs that the capacity of the human body to endure deprivation of nourishment for long periods has been much underrated.

The evidence of the power of the skin to absorb non-volatile salts is hardly less unsatisfactory. It was once confidentially asserted that iron, digitalis, aconite, opium, etc., could be readily absorbed by the skin, but the weight of evidence is now quite against this view. The few cases of a successful result, as compared with the long list of failures, are sufficiently explained as the consequences of the existence of sores or abrasions on the cutaneous surface. We used to hear a good deal about the beneficial effects of applying infusions of digitalis to dropsical swellings, but we doubt if many practical physicians continue to place any reliance on this method of practice. Poppy-head fomentations are still largely used for the relief of pain, and with apparent benefit, but it would be an error to conclude that absorption takes place. More probably the effect is exercised upon the nerve terminations in the skin.

Hitherto, our conclusions have been mainly negative, but there can be no doubt of the absorptive power of the skin for volatile substances, gases, and for non-volatile salts and alkaloids applied by inunction. Turpentine and iodine are examples of volatile substances which can be absorbed by the skin, but any quantitative estimate amount of the substance absorbed is rendered hazardous by the difficulty of excluding, in such cases, the absorption which usually goes on through the mucous membrane of the air-passages.

There can be no doubt of the great capacity of the skin for absorbing various metallic and other substances applied to it by inunction. The recognition of this fact may almost be said to have inaugurated a new branch of therapeutics, which has many useful applications. Mercury, for example, as is well known, may be administered by inunction so as readily to excite constitutional symptoms without entailing the digestive disturbance which so often follows from the ordinary methods of using this valuable drug. The efficacy of the method of inunction seems to depend upon two considerations—first, the vehicle employed for the application of the drug to the cutaneous surface, and secondly, the thoroughness with which the inunction is practiced. For many years, lard was the vehicle commonly employed, until vaseline came into general use, while quite lately a new substance, lanolin, a keratinous fat, isolated by Professor Oscar Liebreich as the natural fat of the skin-surface, has excited much attention as promising to afford a basis for ointments superior to anything hitherto known. Ample time has now elapsed for deciding between the claims of the former two, and we think the balance of evidence is strongly against vaseline. Most practitioners have probably been from time to time greatly disappointed with the effect of various

drugs when applied as ointments of which vaseline was the basis, and there is little doubt that while vaseline is admirable as a protective, it tends to hinder, rather than promote, absorption. Lanolin is too recently in the field for its value to be sufficiently adjudged, bnt it has good promise of usefulness; and if, as alleged by many excellent observers, it enables us to ensure greater effects with a materially reduced strength of our preparations, it will make good another claim to attention on the score of economy. The effectiveness of this method of medication is in exact relation to the thoroughness with which inunction is practiced, as the results of all experiments combine to prove.

If we take a general view of the subject, we must admit, on the one hand, that the absorptive power of the skin has been very greatly over-rated, and on the other, that in certain cases and with certain precautions, it affords a convenient and effective method for the application of remedies. We shall probably soon have more numerous reports as to the uses of lanolin from English practitioners. Abroad it has rapidly won its way into extraordinary favour, as a basis for ointments and salves; and for purposes of inunction and dermatic medication it is rapidly gaining a preference. It is stated that it is so much more active than other substances in promoting absorption, that mercurial inunctions with lanolin, for example, should only be employed of half the strength.

General Anæsthesia Modified by the Preceding Administration of Narcotics.

Dr. J. C. Reeves thus writes in the *N. Y. Med. Jour.*, Dec. 4: This Journal, of November 13th, contains an article on "Anæsthetics and General Anæsthesia," by Dr. Edward N. Liell, in which modification of the anæsthetic process by hypodermic injection of narcotics is most curtly disposed of, and a very positive opinion expressed that the process is a dangerous one. A confession of want of acquaintance with this procedure accompanies this expression of opinion, and therefore renders it harmless to those who have had experience with it. But for the benefit of those who, by that article, may be prevented from resorting to what I believe to be one of our most valuable resources, I would briefly present something of what may be said in favor of the method, even at the risk of repeating what has been frequently laid before the profession before.*

In the article above alluded to, neither is the process correctly named or correctly described, nor is its origin fairly stated. "Mixed anæsthesia" is the correct name, not "mixed narcosis," and this term was first definitely used by Bernard,† who placed the process upon a scientific basis. While Pitha (1861) and Nussbaum (1863) had used narcotics in conjunction with chloroform, the eminent French physiologist investigated this plan by experiment, and extended and promulgated knowledge of it. He also recognized its advantages in a diminished mortality among the animals he anæsthetized for physiological experiment, and in the fact that he was able to tie the lingual artery of the dog, deep in the throat, under the combined action of chloroform and morphine, while he could not perform the operation with either alone.

* "Amer. Jour. of the Med. Sci.," April, 1876. "Trans. of the Ohio State Med. Soc.," 1879. Holmes's "System of Surgery," Amer. ed., Art. "Chloroform." Wood's "Reference Handbook of the Med. Sciences," Art. "Anæsthetics."

† "Leçons sur les anesthésiques et sur l'asphyxie," Paris, 1875.

Again, the process does not consist in "giving a hypodermic injection of half a grain of morphine, and *immediately* thereafter administering chloroform." If it did, the danger would be undoubted. As it is now practiced, "mixed anæsthesia" consists in the hypodermic injection of about a quarter of a grain of morphine together with atropine at an interval of fifteen or twenty minutes before beginning the administration of the anæsthetic. That there shall be an interval of this length of time is believed to be an essential feature. To be precise, I constantly use from six to eight minims of a solution which contains sixteen grains of morphine and half a grain of atropine to the ounce of water, not less than fifteen minutes before proceeding to anæsthetize.

Having stated the process clearly, let us see what can be said in its favor. Theoretically, there are two prominent points, both very strongly favoring increased safety under the anæsthetic process. These are, first, the modifying influence of morphine upon the reflexes; second, the powerfully stimulating influence of atropine upon respiration and cardiac action. These need no labored presentation; they are the plainest doctrines of every treatise on physiological therapeutics. Nor is it necessary here to show how frequently death under anæsthetics occurs by reflex influence upon the heart's action, or by failure of either the respiratory or cardiac function. Remove these modes of death, and by far the major part of the mortality would be abolished.

Clinically, the following points may be presented in favor of mixed anæsthesia:

1. Emotional excitement is allayed. The record of deaths under anæsthetics contains undoubted instances in which the fatal result was solely caused by psychical influences. There can be no question that emotion—dread of the inhalation—is a source of danger. Under "mixed anæsthesia" the nervous system is soothed, the patient already inclining to sleep when inhalation begins.

2. Anæsthesia is much more readily produced, and is also maintained more steadily. A much smaller quantity of the anæsthetic is required, a point of no small importance in prolonged operations and in regard to the duration of after-effects.

3. The period of excitement is moderated and shortened. Every one who has studied the deaths under anæsthetics must have been struck by the frequency with which death has taken place during this period.

4. Absolute quiet of the patient is secured. I have yet to see a patient move a limb, scarcely ever a muscle, during prolonged and severe operations, such as ovariotomy.

5. Last, but by no means insignificant, is a quieter and more painless stage of recovery. Vomiting is certainly not increased; I believe it to be less frequent and severe under this method. After the operation the patient usually passes several hours in quiet slumber, almost entirely free from suffering.

These are the most prominent points observed by me repeatedly during the last fifteen years, during which period I have constantly resorted to the process for all prolonged or severe operations, the anæsthetic used being the well-known A-C-E mixture. Many medical and surgical men of my acquaintance habitually resort to "mixed anæsthesia," and, further, I believe that it is quite generally used—far too generally to be dismissed with the brief notice accorded it by the writer of the article alluded to. Strong testimony in its favor has been given by

Mollow, of Moscow,* and by Kappeler.† But strongest of all is the clinical experience published by Brinon,‡ which contains series of comparative observations of the method contrasted with the use of chloroform alone, and results noted as to amount of anæsthetic used, amount of vomiting, etc.

I will briefly present one comparative observation of my own. It has happened to me but three times to see dangerous symptoms under the A-C-E mixture, and this was one of them. It occurred during the present year. The patient was an inmate of St. Elizabeth's Hospital, a man of about forty, and the operation was for disease of bone about the ankle joint. I administered the anæsthetic, no preceding hypodermic injection having been given. The struggling stage was somewhat more marked than usual, but he was carried through it, and the operation had been in progress some time, when all at once respiration ceased, and examination failed to detect pulse or action of the heart. His head was immediately lowered and his tongue drawn out. There being no response, he was replaced on the table and artificial respiration commenced. After a while inspiration occurred and he was restored—to the great relief of all concerned. It was a narrow escape. About six weeks afterward a repetition of the operation was necessary. I had so much confidence in the favorable influence of a preceding hypodermic injection that I undertook the anæsthetic process without any more than ordinary anxiety. Under the combined influence he went off with less struggling than before, and passed through the operation without the slightest unfavorable symptom.

The opportunity for such a comparison does not often occur. The different results of such a case may be differently explained to the self-satisfaction of different individuals. Those who witnessed them can not fail to have their confidence in the measure increased.

Finally, looking back over a career of some considerable length of years in the practice of medicine, if asked to point out the one thing which, above all others, had given me satisfaction, by which I had rendered the most unmistakable benefit to patients, which had never once disappointed me, nor given me cause to regret resorting to it, I should state it to be the hypodermic administration of morphine and atropine preceding artificial anæsthesia.

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* "Nouveau dict. de méd. et de chir. prat.," t. xxiv. Art. "Opium."

† "Anæsthetica," "Deutsche Chirurgie," Lief. xx. Stuttgart, 1880.

‡ "Recherches sur l'anesthésie obtenue par l'action combinée de la morphine et du chloroforme," Paris, 1878.

V. CLINICAL MEDICINE.

Pilocarpine in the Treatment of Adenitis.

Dr. DOURADO employs pilocarpine in the treatment of chronic enlargement of the lymphatic glands. He mentions a case of enlarged cervical glands in which two injections of salicylate of pilocarpine caused the swelling to disappear. In a case of parotiditis the remedy was equally successful. Injections of pilocarpine also cured two cases of adenitis of the inguinal glands.

Glass in the Eye for Ten Years.

In the *Journal of the American Medical Association*, October 22, Dr. T. E. MURRELL, of Little Rock, Ark., reports a case in which a fragment of glass 15 mm. long, 12 mm. wide and 1½ mm. thick, was carried in the eye for ten years without causing any bad symptoms. At the end of this time the uninjured eye began to tire more readily than had been its wont, and the injured eye was removed as a precautionary measure.

Arterial Transfusion.

Dr. J. M. LUDWIG, of Pontresina (Switzerland), details the case of a mountain-guide, aged 30, in whom extreme collapse followed an enormous hæmorrhage from a gastric ulcer, and who immediately recovered after the transfusion of 100 or 110 grammes of blood from the radial artery, the giver being an Italian lad. The transfusion was performed by means of an ordinary morphine-syringe, with broken needle; not a drop of blood was lost. The operation took place eleven years ago; the patient is still alive and enjoys good health.

Galvanism in the Treatment of Chronic Ulceration of the Tongue.

Dr. MEYER ("Berl. klin. Woch.";) gives an account of the case of a woman who had a painful ulcer on the tongue, dating back to a time when she had bitten her tongue, nine years before, while suffering with severe labor-pains. It had resisted treatment, and for several years it had been so sensitive that she had been obliged to live almost wholly on liquid food. One hundred and ninety applications of the constant galvanic current, extending over a period of a year and a half, the positive electrode being applied to the tongue, cured it.

Plaster Mull.

The name of plaster mull has been given to a dressing consisting of a very thin sheet of gutta-percha, coated on one side with an adhesive substance containing one or more medicinal compounds, and backed on the other side with mull or undressed muslin. The name of salve mull also has been given to a similar kind of

dressing, in which the medicaments are of a more soothing character, consisting of ointments having a basis of suet and lard spread upon mull. The local application of strong salicylic acid "plaster mulls," says the *Therapeutic Gazette*, is strongly recommended by Unna in the treatment of lupus.

Otorrhœa.

Dr. G. B. F. Brunetti, of Venice, gives the case of a physician, aged forty years, who had suffered for thirty-five years from offensive otorrhœa. Tympanum was absent on both sides. The ossicles were present on both sides; on the left they were incompletely ankylosed. The auditory passage and middle ear were cleansed, and iodoform and spiritus vini recti employed; in two days the stench disappeared. For eleven days five-tenths per cent. solution sulphate zinc was used, then the iodoform again. In a month the vegetations in the tympanic cavity had disappeared; and patient was discharged with his hearing much improved.

Cholagogue Pills.

The *New Orleans M. & S. Jour.*, says: Excellent cholagogue pills to use in case of habitual costiveness are the following:

Podophyll. resin	grs. ij to iij.
Extract. belladonnæ	grs. i to iss.
Extract. nucis vom	grs. iv to ij.
Ext. colocynth. co.,	
Pulv. rhei	āā grs. xii to ℈j.

Make into pills.

Patient is to take one pill at night and one the next morning, every time he remains a day without a full and satisfactory operation.

Probable Septic Origin of Pneumonia.

A coincidence showing a probable septic origin of pneumonia is reported in the *Lancet*. On the 18th of October, a man and his wife were admitted into St. Thomas' Hospital, suffering from acute pneumonia of respectively three and four days's duration. Each was aged thirty-two years. The disease ran an acute course, being little influenced by treatment, and they died at the end of four days within a few hours of each other. At the post-mortem examinations, which were made on the same day, acute inflammation of the right lung were found in each; this had attacked chiefly the base in the case of the man and the apex in the woman. It would appear that they had left their house and moved into lodgings only two or three days before the commencement of the disease, on account of the bad smells, making it probable that the disease was of septic origin.

Unilateral Progressive Facial Atrophy.

To the Midland Medical Society, Dr. Suckling showed a woman, aged 42, suffering from unilateral progressive facial atrophy. The affection commenced gradually when she was about eighteen years of age; the left side of the face was at that time noticed to be different from the right. The bones were atrophied on the left, the horizontal ramus of the inferior maxilla was an inch shorter on the left

than on the right side, the fat had almost completely disappeared, the eyeball being retracted, and there were deep fossæ above and below the zygoma. The hair had disappeared over the left half of the front of the skull. There were two well marked grooves on the left side of the forehead, in the situation of the supra-orbital and supra-trochlear nerves. The temperature of the left side of the face was a degree higher than the right. Sensation was unaffected, and the general health unimpaired.

Iodine Irritation.

The external application of a tincture of iodine made with a badly rectified spirit, containing acetone, may be followed by great irritation of the epidermis or even vesication, and similar results may occur when a preparation of good quality is used on a susceptible patient. M. CARLES points out (*Jour. Pharm.*, October 1, p. 315) that the irritation may be removed immediately by the application of alkalies and alkaline salts, dilute ammonia or soda crystals being permissible where the epidermis is robust, as on the hands, whilst alkaline sulphites, bisulphites, or hyposulphites are preferable for more delicate skin. But the best agent, in M. Carles' opinion, is sodium sulphydrate, an aqueous solution containing one to ten per cent., according to circumstances, giving relief in a few minutes. It may also be used for removing iodine stains.

Poisoning by an Aniline Pencil.

Dr. ARTHUR PEARCE thus writes in the *Brit. Med. Jour.*: H. C., aged 23, a discharged soldier, sent for me at 3 p. m. on October 5, 1886. He was then in a state of partial collápse, sweating and almost pulseless. He had vomited, and suffered severely from diarrhœa, not in any way characteristic. He had been subject to dysentery abroad, and had been drinking on October 2d. I gave him a stimulant stomachic, with two grains of grey powder and five of compound ipecacuanha powder, every four hours, with other directions. Of seeing him the next morning, I found that he had revived, and had been sick after every powder, vomiting some blue liquid, unfortunately thrown away. He now showed me an indelible aniline pencil, which he had used on October 3d, to push out a fang of a tooth left after partial extraction on October 1st. On the same day he was seized with vomiting and purging, and just before I saw him he was said to have had an epileptiform fit. He recovered from all symptoms in a few days, only some weakness remaining.

Eggs in the Dietary in Bright's Disease.

In order to solve the problem of alimentation in the subjects of Bright's disease, LOWENMEYER (*Lyon Medical*, No. 38, 1886), placed a number of patients upon a regimen which was as regular as possible, and added to the diet-list from six to nine eggs a day. In four of the patients, of whom three suffered from amyloid kidney and one from nephritis consecutive to cardiac disease, the addition of eggs to the dietary was followed by no increase in the excretion of albumen in the urine. In three others there was a notable increase; but the experimenter excluded two of them, one because the patient was not carefully watched, and the other because menstruation occurred just after the beginning of the experiment. In the third case, one of interstitial nephritis, the author remarks

that the increase in albumen might be accounted for by the fact that the patient took the eggs raw, while the others ate them cooked. He concludes, as a result of these experiments, that an alimentation even very rich in albuminoid matters causes no increase in the amount of albumen in the urine.

Dyslexia.

Dyslexia, as observed by BERLIN, *Archives Générales de Médecine*, November, 1886, in six cases consists in the impossibility of speaking more than three, four, or five words consecutively. Patients read these words correctly, in whatever characters printed, but they are incapable of continuing to speak. Such patients have no other trouble with speech; they pronounce well words spoken in their presence, and are perfectly intelligent. Dyslexia has nothing in common with the visual heaviness of ophthalmic cases, for it accompanies no disease of the eyes; it is an incomplete and isolated verbal blindness.

It generally appears suddenly, with various cerebral symptoms. In four autopsies lesions of the left cerebral hemisphere were found; in one case a softening of the gray substance of the lower portion of the parietal lobe; in others the centre of softening was not clearly defined. These changes were accompanied by extensive alterations in the blood-vessels.

Dyslexia will be, according to the author, an interesting clinical sign in diagnosis and prognosis, indicating a grave cerebral lesion occurring shortly before death.

Salt Baths in Fevers.

Dr. RAVINOVITCH has made a number of experiments in cases of typhoid fever to determine the relative value of salt and fresh-water baths, and formulates his conclusions as follows (*Meditsinskoye Obozreniye*, No. 14, 1886: 1, salt baths reduce the temperature several tenths of a degree Centigrade more than ordinary baths; 2, the difference in the abstraction of heat is greater the first half-hour, gradually becomes less, and is hardly noticeable at the end of three hours; 3, evening baths reduce the temperature in a greater degree than do those given in the morning; 4, salt baths retard the pulse more than ordinary baths, and, 5, they also reduce the number of respirations per minute, rendering the inspiratory efforts deeper and more prolonged; 6, salt baths increase the muscular strength in a greater degree than do fresh-water baths; 7, the patients feel better while in the salt bath and after its termination than they do when a fresh bath is given; 8, the difference between salt and fresh baths; as regards the slowing of the pulse and respiration, is not so great as to indicate any very powerful influence of salt baths on the functional activity of the heart and lungs.

A Collection of Pine Leaves in the Bronchi Causing Repeated Hæmorrhage.

Dr. AXEL KEY mentions in the *Hygeia* the case of a man, thirty-six years of age, who had suffered for seventeen years from violent hæmorrhage from the lungs. He died in the Serafim Hospital, December 1st, 1885, after a short residence there. At the post-mortem examination the body was found to be robust, and not emaciated. In both of the larger bronchi there were a number of circumscribed blood coagula. The right lung was unaltered; in the left there was

a slight enlargement of a smaller bronchus, with induration of the walls and immediately surrounding lung tissue. In the cavity of the dilatation there was a quantity of coagulum. Outside the cavity there were six pine leaves partly massed together, but with the points free; the leaves were of a brownish-gray faintly changing into green, stiff, and with sharp points. The marks of the points appeared on the mucous membrane, and were several millimetres long. The lung was in other respects healthy. The leaves were, in the opinion of Dr. Key, the cause of death, owing probably to the fact that latterly they had embedded themselves more deeply in the lung, or that their position had changed to a new and more dangerous place.

BOSTON MED. LIBRARY ASS'N MAY 22 1888

An Iodized Hydrogen Water for Use in the Uric Acid Diathesis.

Dr. J. MORTIMER GRANVILLE thus writes in the *Lancet:* The need of a simple water which may be taken freely by persons suffering from uric acid accumulations, with the effect of washing out the acid and its salts, has been long felt. For myself, I believe the value of "waters," generally, depends much more on their capacity for taking up and washing out excrementitious matter while passing through the blood and the extra-vascular fluids of the organism than upon the specific effect of anything they introduce into the system. I have now to suggest that an excellent and potable water may be made by very slightly iodizing distilled water, or dissolving in it a minute quanity of hydriodic acid—not enough of either to render the taste disagreeable—and then passing well-washed hydrogen gas through it. Water will only dissolve about 2 per cent., by measure, of hydrogen gas, but this is by no means an inconsiderable proportion as compared with that existing in many of the natural waters of high repute; and beyond question it greatly increases the capacity of the water for holding solids in solution. I venture to think the profession will find the use of a simple non-effervescing water of this description of great value, and it can readily be prepared by any competent chemist. It is the measure of the hydrogen, and non-the weight, which must be regarded; 100 cubic inches only weigh 2.25 grains.

Idiopathic Bubo-adenitis.

In the *Brit. Med. Jour.* Oct. 23: Dr. E. MORY, surgeon to the Dutch cruiser *Atjeh*, in Curaçoa, describes what he thinks to be a hitherto unrecognised morbid condition, which he calls "bubo-adenitis idiopathica endemica." He saw eight teen cases, all but one occurring in European new-comers, aged from 18 to 35. The disease developed itself, always rather acutely, in the course of three or four days, and consisted in the appearance of hard, painful, and very tender swelling of the inguinal lymphatic glands on one or both sides, the size of the tumor varying from that of a hen's egg to that of a man's fist. The swelling was accompanied by general malaise, slight fever (100° to 103° Fahr.), loss of appetite, and constipation. As a rule, the patients (sailors) remained disabled for about four weeks, then the swelling decreased, and pain was felt only after prolonged standing or walking. A complete resolution, however, was not observed in any of the patients up to the date of the article (for six months). Local therapeutic measures (iodine, mercurial ointment, iodoform, collodion, blisters, Goulard's water,

cataplasms, massage, injection of a two per cent. solution of carbolic acid or ergotin) remained entirely useless. General means (salicyl, quinine, regulation of the bowels, absolute rest, light laxatives) only improved the constitutional state of the patients. Dr. Mory thinks that the disease in question is caused by an infection with the microbe of elephantiasis.

Paralysis after Scarlet Fever.

Among the paralyses consecutive to the acute diseases, those coming on after scarlatina are among the most rare. Dr. WILLEMS of Gand, *Journal de Médicine et de Chirurgie Pratiques*, No. 9, 1886, relates the case of a young woman, twenty-eight years old, who had a very severe attack of scarlet fever, and toward the end of the eruptive stage began to complain of flying pains in the limbs, accompanied with a certain amount of œdema. Soon after she had a feeling of unusual heaviness in the upper extremities, which was quickly followed by complete paralysis. There were also very severe pains complained of in these members, but thermic and tactile sensibility were unaffected. The complete paralysis of the upper extremities contrasted very strangely with the absolute freedom of voluntary movement remaining in the lower limbs. This condition remained for two days, when power of motion began gradually to return, and at the end of two weeks the cure was complete. During this time there was considerable œdema about the malleoli, but the urine was normal. The localization of this paralysis was very singular, and to explain the local conditions it is necessary to assume that there was a lesion confined to the cervical enlargement of the cord. The nature of the lesion cannot be stated with any degree of certainty. M. Willems was able to find but five recorded cases of scarlatinal paralysis, and these differed very essentially in their clinical features from the case above related.

Cardiac Dyspepsia.

In a recent thesis on this subject (*La France Médicale*, October 14, 1886), Dr. P. MULLER maintains that there are few affections of the heart which are not accompanied at one time or another by gastralgia, dyspeptic troubles, or even serious lesions of the stomach. In some forms of heart disease, especially in aortic insufficiency, dyspepsia is often the first, and for a long time the only, symptom pointing to the existence of valvular trouble. The gastric troubles of cardiac origin may be classed under three heads: 1. Affections of nervous origin associated most frequently with cardiac neuroses; 2. Trouble due to visceral anæmia (gastralgia), occurring more especially in aortic valve lesions; 3. Congestive disorders, the type of which is the dyspepsia of mitral disease. In the treatment of cardiac dyspepsia due regard must be had to the probable pathogenesis. In the reflex dyspepsia of neuroses of the heart, washing out the stomach, which is an excellent sedative of the visceral nervous system, might be tried. In the other form recourse must be had to the ordinary eupeptics, but the use of remedies directed to the heart should not be omitted. In the gastric congestion consequent upon mitral disease, the cardiac tonics, such as digitalis, convallaria, and caffeine, will be of service if they can be retained. In aortic disease, on the other hand, opium and nitro-glocerine will do more good. M. Huchard has recommended a dry regimen in dyspepsia symptomatic of certain general diseases

in which there is increased vascular pressure, and this might be advantageously insisted upon in certain forms of cardiac dyspepsia.

Turpentine in Painful Affections of the Digestive Organs of Children.

Dr. Bedford Brown, in the *Journal of the American Medical Association* (September 25, 1886), advocates the use of turpentine in the management of the more painful and grave affections of the alimentary canal of infants and young children. According to his personal experience, the oil of tupentine fills a place which no other remedies, such as opiates, astringents, alkalies, mercury, or bismuth can fill. He believes the therapeutic action of turpentine to be of multiform character. It is eminently soothing to the irritated and inflamed mucous membrane, and seems to "promptly arrest the rapid exfoliation of epithelium." It is antifermentative, deodorant and antiseptic. He further holds the oil to act as a stimulant to the salivary, stomachic, pancreatic, and intestinal secretions. The author lauds the beneficial action of turpentine, especially in gastralgia, intestinal catarrh, enteritis, and a number of unclassified painful affections of a functional kind. He prescribes the drug according to the following formula:

℞. Mucilag. acac. . . . . f.℥ iss.
Sodæ bicarb . . . . . grs. x.
Chloroformi . . . . . gtt. x.
Ol. terebinth. . . . . ℥ss.
M. Sig.—A teaspoonful every two or three hours to an infant of six months.

The Treatment of Rheumatism.

The *Med. News*, Dec. 4, says: Dr. Osler employs in mild cases, with only one or two joints involved and the temperature not above 102° F., the citrate of potash in ℥ss doses every four hours. If there is much pain and the patient is restless, Dover's powder grs. x at night. In more severe attacks, with polyarthritis, and fever above 103°, he orders salicylate of sodium grs. xv every two hours, with a similar quantity of the citrate of potash. The important influence of the salicylate is believed to be in the reduction of the pain and fever. It is not thought to have much influence in lessening the duration of the disease; and, on the other hand, when pushed for many days and in large doses, it is thought directly to favor the occurrence of relapse. Hence, as soon as the pain is relieved, the amount of the salt is reduced, and it is stopped as soon as possible. It does not probably influence, one way or the other, the occurrence of endocarditis. When the temperature is above 103.5° antipyrin, grs. xx, is ordered. With fever of 105° the cold pack is employed. Lemonade and carbonated waters are allowed freely. An unstimulating liquid diet is given. Blankets are preferred for the bedding of the patient. Special care is enjoined in changing the clothing, and a wad of cotton-wool is placed over the front of the chest. The joints are wrapped in cotton-wool, or, when very painful, in spongiopiline, or flannel, soaked in Fuller's lotion (hot) (Liquor Opii Sedativus, ℥j; Potass. Bicarb., ℥iv; Glycerin., ℥ij; Aquæ, ℥ix). If the salicylate and the local application fail, as they sometimes do, to relieve pain, opium is freely given. During convalescence iron and tonic doses of quinine are ordered.

Palpatometry as a Means of Diagnosis.

A Russian physician, Dr. V. V. FILIPOPOVITCH, has recently published a pamphlet containing some observations on the advantage of ascertaining the degree of tenderness over particular areas by means of an instrument corresponding to Eulenberg's baræsthesiometer; it may be compared to a vertical spring letter-weight, the plate of which is replaced by an extremity having the desired form. The term used is "palpatometry;" the highest pressure, by variously shaped extremities, which could be borne without pain, was tested. This was found, by trial on a number of healthy subjects, to vary from 1,500 to 2,000 grammes, when instrument with the knob was used. The work of M. Peter is referred to, as also Dr. Burney Yeo's lectures on Pain in the Region of the Heart and Palpitation (which have been translated into Russian), and several diagrams and charts are given of heart and other diseases, where the mapping out of the surface, according to iso-æsthesic, or, rather, iso-analgesic, areas, indicates with great exactness the course of the disease, whether favorable or otherwise. The author has observed that, in typhoid fever, the spleen undergoes a marked and sudden increase of sensitiveness within the forty-elght hours immediately preceding defervescence. This was quite appreciable to ordinary manual palpitation, and, during an epidemic of typhoid, he was able to predict pretty accurately the occurrence of defervescence. He points out the value of more exact means of estimating tenderness in affections where peritonitis is feared.

A Cleanly and Economical Method of Applying Ointments.

At a recent meeting of the Manchaster Medical Society, Dr. BROOKE exhibited a number of ointments, prepared with a solid base, composed of cacao butter, wax, and oil, or lanolin, and cast into the form of sticks ("salve-sticks"). He has found them particularly useful in making applications to the face and hands, since, their melting-point being high, they do not run at the temperature of the body, as do ointments prepared with the ordinary bases; and, when dusted over with powder, they are practically invisible. When covered with Mather's or Seabury & Johnson's adhesive rubber (waterproof) plaster, they offer a mode of applying remedies to the skin which is more durable than the Unna-Beiersdorf plasters, and less expensive. With this protective covering, they are especially applicable to the treatment of psoriasis by chrysarobin, and possess several advantages over the methods of Pick, Auspitz, and Besnier, in that the fatty menstruum is preserved; they do not need such frequent renewal; they are more readily applied, and do not cause any dragging on the skin and hairs. The fear of staining the clothing is completely removed, and the patient may, moreover, bathe without disturbing the dressing. They are supplied enclosed in small cases, like those used for cosmetics, so that they can be conveniently carried in the pocket. Somewhat similar preparations, which had been since brought out and described by Dr. Unna, were also shown.

Chorea Cured by Gymnastic Exercises During Hypnotism.

The *Practitioner*, October, 1886, gives a very careful and detailed account of a case of chorea in an Italian girl aged twelve, published by Dr. RICCARDO PARI in *Lo Sperimentale*, July 1886, lviii. 77–83. When it came under his notice it

was not otherwise remarkable except that it had lasted for four years. It came on after a sharp attack of scarlet fever, and there was no accompanying rheumatism or hysteria of any sort. Careful hygiene had been kept up, and the treatment by electricity, tonics, and arsenic fully tried. When examined in October, 1885, there was no anæmia, no cardiac abnormality, nor other morbid physical signs beyond moderately severe bilateral chorea. In recent medicine there are some cases of chorea cured by suggestion in hypnotism, and this was first tried by Dr. Pari. The girl was hypnotized by making her gaze fixedly at something in her hand, and it was strongly urged upon her when she was in the hypnotic condition that she should have no more chorea. Two such attempts had no success, which was ascribed partly to her distrust in all methods of cure after her long experience. Then it was remembered how useful gymnastics had been in the cases of Hasse, and at the third hypnotic sitting this idea was taken up, and she was ordered to hold her arm out and keep it still. There was slight tremor after six or seven minutes (when the muscles in a normal state generally begin to grow exhausted), but she was ordered to keep it still, and succeeded in doing so for much longer. In subsequent sittings she obeyed orders to keep both arms outstretched for a quarter of an hour without tremor, to walk quietly, to stand still in all varieties of position, first on one leg, then on the other, etc. Between the sittings there was gradual improvement, and after twenty of them she was quite well.

A Case of Acute Peritonitis, Attended by Very Unusual Symptoms.

Dr. R. H. QUILL thus writes in the *Brit. Med. Jour:* The obscurity which surrounded the diagnosis of the following case will, I think, be understood after its perusal.

A well-developed man, with a previous history of good health, was taken somewhat suddenly ill on the day before I saw him, with pain in the abdominal region, accompanied by constipation.

I found him lying on his back with his legs extended, and complaining of a slight feeling of soreness in the left hypochondriac region. There was no abdominal enlargement, and so little tenderness that kneading the abdomen gave no pain. He looked drowsy, but answered at once, quite coherently, the various questions put to him during my examination. The respirations were greatly increased in frequency, as was also the cardiac action, notwithstanding which on pulsation, of even the faintest description, could be appreciated in either radial artery. His tongue was clean, but very cold to the touch. There was no vomiting or nausea, but the bowels were obstinately constipated, and the urine was surpressed. Death took place within two hours after I first saw him. At the *post mortem* examination, the abdominal cavity was found to contain a considerable quantity of sero-fibrinous effusion, the peritoneum was intensely injected, and the intestines were covered with flakes of recent lymph. No intestinal perforation was discovered, nor any appreciable organic disease.

I think that the above case will prove interesting to the readers of the journal, for the following reasons: (1) The suddenness of the onset; (2) the absence of any recognizable cause for the attack; (3) the remarkable absence of pain; (4)

the disappearance of the pulse, notwithstanding the presence of rapid and powerful cardiac action; and (5) the rapid progress of the case to a fatal termination.

A Rare Case of Epilepsy.

Before the Medical Society of London Dr. HUGHLINGS JACKSON related the case of a boy, seven years of age, in whom epileptic fits were artificially induced by any unexpected touch on the head. When three days old, the boy had a convulsion. At the age of two years and a half he had an "ordinary" epileptic fit. Of these latter fits he had had four attacks of the same kind, or rather *degree*. Ever since the first so-called ordinary epileptic fit some imperfect use of the left arm and leg was noticed, and has ever since remained. About the age of two years and a half the boy began to fall down, but these falls were really fits. He never "fell" unless the head or face were touched, but the fit would not occur if he knew he was going to be touched. Stoppage of respiration was very evident in the fit. The eyes were turned to one side, generally the right. Sometimes as many as fifty falls occurred in one day, and never a day passed without some. Touching any part of the head or face was effective. Several appeared also during sleep when he accidentally touched his face or head. These sudden inopportune falls had caused an enlargement of the left frontal eminence, and also that of the right side. The left arm was slightly less in circumference, and its movements were clumsy; there was something like athetosis in the left hand when the right hand was engaged in drawing or writing. He limped with the left leg, which was also less in circumference than the right. There was no alteration in the knee-jerks, and no ankle clonus. Perhaps the left side of the head was more sensitive, but no one place could be made out that was more sensitive than another. At times the boy said his left arm felt "heavy." The fits were not ophisthotonic, as happened in feigned fits. Dr. Jackson described three forms of epilepsy—(1) epilepsy proper; (2) epileptiform seizures; (3) due to nervous discharges in the pons Varolii or medulla oblongata. In the case above there was a local lesion somewhere, as the hemiplegia showed. The epileptogenous zone was less defined than occurred in Brown-Séquard's guinea-pigs. Nervous discharge in some part of the pons was the probable cause of the falls or fits.

The New Remedy for Tetanus.

Dr. IRWIN C. CARLISLE thus writes in the *Cleveland Med. Gazette*: In a case of traumatic tetanus, which came under observation recently, and in which after using—but with little effect—large doses of potassium bromide, and chloral hydrate, I decided to make trial of the recently discovered alkaloid, urethan, said to be a physiological antidote in strychnia poisoning, a condition with symptoms closely allied to those of tetanus, the recovery of a case of the latter under its use, so reported recently in the Lancet, suggesting itself.

Being fortunate in obtaining from Messrs. Mayell & Co., of Cleveland, a reliable preparation of the agent, I commenced by giving hypodermically (it being readily soluable in water and non-irritating) two grains at an interval of an hour. No material effect manifesting itself, at the second hour four grains more were administered; and before thirty minutes had elapsed it was quite apparent to those present, as well as to myself, that the convulsive movements were becoming less marked.

Following the fourth hypodermic, there was no longer room for doubt as to its effect upon the exalted reflex function of the cord; for instead of tonic spasms—frequently so powerful as to occasion opisthotonos—there remained to contend with convulsive movements, but clonic in character. Although the evidence of central nervous irritation was not entirely removed by our remedy, and a fatal ending occurred; it is possible that a different result might have followed had the case been seen earlier, instead of coming under treatment five days after the malady first declared itself.

Certainly urethan is deserving of further trial in this stubborn and dangerous disease, in which the bromides, chloral, curare, physostigma, etc., have failed to accomplish much.

In view of the fact that strychnia poisoning is occasionally encountered, it behooves the practitioner to be prepared for such ane mergency by having on hand a supply of urethan.

Perhaps ere long some enterprising pharmacist will prepare for the hypodermic use some convenient tablets of this valuable alkaloid.

The Treatment of Entero-Colitis.

Dr. S. C. SMITH gives the following formulæ in *Progress*: The following is a favorite formula with the writer, and proved very successful during the last summer. For children from one to two years of age:

℞.—Bismuthi subnitratis, } āā. . . . . ʒij.
Cretæ preparatæ, }
Pepsini saccharati. . . . . ʒj.
Gum acaciæ,. . . . . ʒxj.
Glycerini, ... ℥j.
Tr. kino,. . . . . ℥ss.
Aq. cinnam. } āā. . . . . ℥iss.
Aq. puræ, }
Tr. opii. deodoratæ. . . . . gtt. xx.

M. S.—Tablespoonful every three or four hours.
The proportion of tr. opii. to be increased or diminished according to age.

In cases of violent vomiting he has seen the best results follow the administration of the following ℞ given ice cold:

℞. Vini. ipecac,. . . . . ʒj.
Tr. nucis vom . . . . . gtt.x.
Tr. opii. deodor., ... gtt. x.

M. Shake well.
S.—Give five drops after every act of vomiting, and apply a belladonna plaster to epigastrium.

The following ℞ has often given great satisfaction as a tonic and digestive in these cases. For three years of age:

℞. Acidi nitro-mur. dil., ... ♏iij.
Quinidiæ sulph., ... gr. ss.
Aquæ destil., ... ℥ij.
Pepsini porci . . . . . grs. iij.
Liq. strychniæ, ... gtt. ¼.

M. S.—Give the above before each meal three times a day. A raw-meat diet is highly commended in obstinate cases.

A Simple and Efficient Method of Treatment of Tænia.

Dr. H. A. Veazie thus writes in the *New Orleans M. & S. Jour.*: During the past year a little boy, aged three years, became the host of a large tænia, which was attributed to his having eaten raw beef, given to him during an attack of dysentery some few months before.

His symptoms included restlessness, wakefulness, capricious appetite, irregular fevers, urticaria, coated tongue denuded in spots, and a tendency to fall without any apparent cause. An examination of his stools revealed on one or two occasions several inches of the worm.

Several physicians were consulted and various remedies were tried, but without success. Among other things used were male fern, pumpkin seed and kamela, but their only effect was to bring away a few joints. One reason for the failure was the impossibility of getting the little fellow to fast. He would cry so hard and beg so piteously for food, that his mother could not starve him, as she was instructed to do.

Finally, after every other plan had been tried unsuccessfully, the following course was adopted: A large pumpkin was bought and made into pies. The seed were dried and hulled, and the pockets of the little fellow filled with them. Whenever he got hungry he was given a piece of pie, about all he ate in twenty-four hours. In addition, he was encouraged to eat the seed quite freely. For one day he tried seed and pie exclusively. At night he was given fifteen grains of kamela. The next morning, the first thing he said to his father was, "Papa, the worm is dead." At nine o'clock he passed the worm, head and all. Its total length was thirty feet, which, added to the pieces which had been passed before, and carefully measured, made altogether forty feet. The little fellow is now in excellent health.

I have since tried this plan in several cases with good results.

Muscular Percussion Reflex as a Method of Clinical Investigation.

When the chest wall is subjected to a tolerably smart blow with the finger or percussion hammer, an elliptical elevation of the surface may frequently be observed for a few moments after the blow. This fact, which has been remarked by Mr. Lawson Tait, Dr. James Ross, of Manchester, and others, has acquired some importance from the somewhat analogous observations of Westphal, Erb, and others on the tendon, osteal, periosteal, and muscular percussion reactions. Quite recently too, a Russian author (Dr. V. V. Philipovich, of Odessa), has investigated the conditions under which the phenomenon is produced, showing that it may be made available like other reflexes for diagnostic and clinical purposes. In his observations he made use of a percussion hammer furnished with a spring and an index by means of which the force of each blow was registered. The pectoral regions of 100 presumably healthy young men were examined. The lowest force required to produce the phenomenon—which, by the way, Dr. Philipovich proposes to style "loco-tetanus," instead of "idio-muscular contraction," the term used by Dr. Ross—was 400 grammes, and the highest 2000 grammes. On analyzing the observations, it was evident that the lower degrees of force were invariably sufficient in weakly and ill-formed subjects who had been either

permanently or temporarily rejected by the recruiting authorities. Still lower figures were obtained on the examination of diseased persons, the lowest of all being afforded by phthisical patients. In all chest cases it was noticed that the "loco-tetanus" was more easily produced on the side where the disease was situated, or on that where it was the more extensive; thus in a case of dry pleurisy of the right side the figures obtained were—for the sound side, 550 grammes, and for the diseased side 150 grammes. The mean force required in the 100 healthy subjects was 750 grammes on the right side and 850 grammes on the left; and as the limit of that which could usually be borne painlessly by healthy persons with the instrument used (the head of which was a metal ball covered with gutta-percha) was about 700 grammes, it may be roughly assumed that if the contraction can be produced by a tap, the force of which is much below that which is sufficient to cause pain in a healthy subject, some pathological condition is probably present, or at least that the general state is below that of a vigorous man.

Saturnine Gout.

Dr. G. LORIMER, in the *British Medical Journal*, has given the results of his observations of 107 cases of gout, of which he believes "lead impregnation" was the predisposing cause. He considers that the characteristics of gout due to *plumbism* are, as a group, distinct from gout due to other causes. The disease appears at an earlier period of life, the majority of cases of first attacks occuring before the age of thirty-five. Owing to the early age at which the patients contract the disease, it generally assumes the acute or asthenic form of arthritis. In the majority of the 107 cases the type of the arthritis was asthenic or adynamic. In ordinary gout the blood corpuscles undergo no change either in number or quality; in the saturnine gout there is generally anæmia as a result of lead-cachexia.

In 89 out of the 107 cases albumen was present in the urine, either intermittently or permanently. Garrod has found albumen present in 26.5 per cent. of the cases of gout which he investigated. Albuminuria has been noticed in chronic lead-poisoning by Ollivier, Charcot, and Gumboldt.

In saturnine gout the specific gravity of the urine averages 1,012; it contains less uric acid than normal urine, and in the final state of the disease the uric acid disappears. In 69 instances arterial thickening and degeneration was noticed. In the advanced stages of the disease cardiac hypertrophy was commonly noticed. The *modus operandi* of the lead in effecting these changes is obscure; but it may, in part at least, be due to the contraction of the muscular walls of the arteries increasing arterial tension. In only two instances did Dr. Lorimer notice skin disease in connection with saturnine gout. In non-saturnine gout eczema is present in 18 per cent. of the cases.

The author found the *blue line* upon the gums in 87 of his cases. In cases of gout this sign should always be looked for. In 28 cases the joints of the feet were affected; in 7 of these the great toe alone was involved. In 20 cases the hands were the parts attacked. In 34 cases both feet and hands were affected. In 4 cases the knees and elbows were the seat of the disease; and in the remaining 21 cases the knees alone were implicated. In 23 of the patients tophaceous

deposits were found on the helix of the ear. Saturnine gout seems specially to attack the kidneys.

There appears to be a large amount of disease and a high rate of mortality amongst the operatives in white-lead and white-lead paint works, which seem to have attracted but little attention from the authorities of these countries. It is time that the hygiene of these works should be officially investigated.

Case of Diphtheria of the Vagina without the Throat being Affected.

Surgeon JAS. B. CLIBBORN thus writes in the *Lancet:* Mrs. T——, the wife of a private in the Royal Marine Light Infantry, when attending her child, who was suffering from diphtheria, was scratched by him on her right wrist. Some days after (time uncertain) a few isolated, inflamed vesicles that were very painful appeared on the wrists, which implicated the glands at the bend of the elbow and axilla. There was no pyrexia, and the throat was not affected. The wrist soon healed under treatment, and the inflammation in the glands subsided, when a fresh crop of vesicles appeared around the nipples of both breasts; there was still no rise in temperature, and the patient complained of little inconvenience beyond weakness and general malaise. The latter crop of vesicles went away as rapidly as those on the wrist, but the patient complained of weakness, daily increasing, accompanied by anorexia, with insomnia; she also stated that there was a fetid discharge from the vagina. On making a vaginal examination the mucous membrane was found to be greatly inflamed, discharging pus and covered in parts with well-developed shreds of false membrane. The constitutional symptoms now rapidly developed, asthenia increased, and the patient suffered at times from delirium and delusions, and one well-marked epileptiform convulsion. The urine contained a small quantity of albumen. The highest temperature taken only indicated 99.4°; the throat at no time presenting an inflamed appearance. The inflammation in the vagina daily increased, large shreds of false membrane, almost forming complete casts of the vagina, were discharged; asthenia was great; the pulse small and compressible; the pupils were frequently irregular, and responded feebly to light. About this period of the disease the patient (who was pregnant) was attacked with well-marked labor pains, occurring at regular intervals. As it was considered that, should a miscarriage take place, the disease would extend to the uterus, with a probably fatal issue, very large doses of opium were given with a view of stopping the uterine contractions, which had the desired result after the patient had taken about five grains of this drug. Under treatment the discharge from the vagina became less, and the development of false membrane decreased till about ten days after its appearance, when it had entirely disappeared. Convalescence rapidly took place, and the patient, who was removed to the country, was subsequently delivered of a living child, with no bad results.

Treatment.—Carbolic acid combined with quinine was given internally every three hours (each dose containing one minim of carbolic acid, ten minims of glycerine, and one drachm of tincture of quinine, in an ounce of water), the urine being carefully watched during its administration. Iodoform was applied locally with vaseline (a drachm to the ounce). When the vagina became affected, it was frequently washed out with a solution of permanganate of potash. Strips of lint

soaked in iodoform and vaseline were introduced into the vagina and changed every few hours. Stimulants and strong liquid food were given in large quantities when the asthenia was great.

Remarks.—This is one of several cases I have treated with carbolic acid and quinine given internally in this disease; the results so far have been more satisfactory than any other treatment I have seen tried. The cases in which it has been adopted have, however, been too few as yet to merit more than a suggestion that it is worthy of a more extended trial.

A Few Observations on the Combined Use of Cocaine with Lanoline.

Dr. Ernest Wende thus writes in the *Med. Press of Western New York:* Having experimented more or less with lanoline, the new basis for ointments recently introduced into therapeutics by Prof. Liebreich, of Berlin, I found that, owing to its non-irritating properties, to its rapid absorption, and retention by the skin, cocaine could advantageously be combined with it for the treatment of certain disorders. In burns and scalds, I found the local treatment with a lanoline-cocaine ointment very satisfactory. It speedily overcomes the agonizing pain. It is at once soothing and protective. One of the formulæ which I have used for the purpose has been:

℞. Cocaine mur. . . . . 1.00.
Lanoline . . . . . 24.00.

thickly spread upon a piece of soft linen or cambric.

Should a more cooling application be desired, which is often so grateful to the sensitive condition in the first and second degrees of Dupuytren's classification of burns, then an addition of water is requisite, the cooling properties depending upon the capability of lanoline to absorb water; and for this means it is certainly the base *par excellence.*

℞. Cocaine mur. . . . . 2.00.
Aquæ destill.,
Lanolini, āā . . . . . 17.00.
Cetacei . . . . . 4.00.

Or, probably still better, is a method which I have recently adopted, that is, by first painting the painful surface with a two per cent. solution of cocaine, to be immediately followed by a dressing of

℞. Acidi carbolici . . . . . 5.00.
Lanolini . . . . . 95.00.

to be spread on lint or some soft cloth. This plan, besides being soothing and protective, has the additional advantage of being antiseptic, which is quite important if discharges are present.

Then, again, the intolerable itching, which is often so marked, so annoying and troublesome in pruritus ani, can be greatly alleviated on applying

℞. Cocaine mur. . . . . 1.00–2.00.
Lanolini. . . . . 20.00.

But as this irritation is generally symptomatic of some disorder, as hæmorrhoids, eczema, fistulæ, oxyuris vermicularis, constipation, hepatic affections, etc., therefore it is always essential, in order to treat such patient intelligently, with a hope of effecting a radical cure, that one first discover its real cause. Simply to allay the itching will not suffice.

Should the suffering be due to eczema, erythema or herpes, then an ointment of

℞. Cocaine mur. . . . . 1.00.
Bismuthi subnit. . . . . 2.00.
Lanolini . . . . . 20.00.

will not only relieve, but will usually remove this almost unbearable disease.

I may further state, that the small excoriations which so frequently accompany this malady, heal readily on application of the following recipe:

℞. Argent. nitrat . . . . . 0.50–1.00.
Lanolini. . . . . 9.00.

Report of a Case of Actinomycosis.

Dr. A. J. Ochsner thus writes in the *Chicago Med. Jour:* Until the autumn of 1877, this patient, aged 56 years, was in perfect health, following his occupation of stock-raising and dealing in live stock. At this time he was engaged in shipping stock to the east. During a very fatiguing journey and much exposure to draughts of cold air, the patient experienced severe pain in the left antrum of Highmore, which he supposed to be neuralgia caused by defective teeth. He consequently had removed from his upper jaw seven teeth which proved to be sound, and he secured no relief. All the other teeth of his upper jaw had previously been removed at different times, having been more or less decayed.

For about six months the patient suffered excruciating pain in the left antrum and in both eyes, continuing each day from sunrise until sunset.

Early in 1878 there was a spontaneous opening of the abscess into the pharynx, the sinus closing and re-opening repeatedly, each time evacuating a considerable amount of pus and some blood, and giving the patient marked relief.

A portion of the discharge usually entered the larynx at night, giving rise to severe cough.

During the month of May, 1880, the patient underwent a surgical operation, consisting in making an opening through the mouth into the antrum above the first molar, curetting and irrigating the cavity. The irrigation was continued by the patient two or three times daily for two years. During all of this time he suffered severely from pain and weakness.

In the spring of 1882, the patient went to the northern part of Mexico and spent the summer on the plains and among the mountains between this point and Colorado, returning in the autumn to Indiana with the antrum closed and his general health much improved.

Later during the same autumn he returned to Mexico, and remained there in comparatively good health for twenty months. At this time, however, he began to suffer from a sensation of suffocation, which still continues.

In July, 1885, the patient began to cough, the cough subsiding somewhat under treatment, but increasing to an alarming extent in July, 1886, and continu-

ing to the time of admission into the Presbyterian Hospital of this city, October 13th, 1886.

During the months of September, 1885 and 1886, he expectorated blood, but he thinks it came from the posterior nares.

Since the beginning of October, 1886, he has again expectorated mucus and pus, streaked with blood, which undoubtedly comes from the lungs or the bronchi.

He has lost thirty-seven pounds in weight during the past two years. His position is stooping, the chest is full in front and there is a decrease of motion on the left side, with dullness, roughened respiratory sounds, and numerous mucous râles. Below the upper border of the fifth rib and throughout the right side the sounds are normal.

The above history led me to suspect actinomycosis of the left lung, having primarily existed in the antrum. On making a microscopic examination of the sputum, the characteristic fungus was at once found, confirming the diagnosis, of course, beyond a doubt.

The following facts may be of practical interest in connection with this case:

He has been engaged in raising, buying and selling, and handling large numbers of cattle for more than forty years. Among these animals there were many suffering from the disease known as lumpy-jaw, and it was the practice of the patient to cure the animals thus affected by freely opening the abscess by crucial incision, extirpating as much as possible of the lump and introducing about one drachm of powdered arsenic into the cavity. Repeating this once or twice usually effected a permanent cure.

Treatment of Phthisis.

The introduction of sulphuretted hydrogen into the respiratory passages by breathing gives rise to various disturbances, which may terminate, when a sufficient amount is taken, in death; but it was shown by Claude Bernard that when absorbed by the rectum an almost indefinite quantity may be eliminated by the lungs without harm. Dr. Bergeon, of the Faculty of Lyons, has been experimenting on the action of gaseous enemata for some time, and finds them useful in a variety of diseases depending upon the presence of micro-organisms. The practical point was to find a suitable vehicle for the administration of the sulphuretted hydrogen, which should at the same time be without danger to the economy and easily tolerated by the bowel. It is said that carbonic acid fulfils these conditions. It is easily tolerated by the large intestine. It is rapidly absorbed, and is eliminated by the lungs with the medicinal gas it contains. It has, moreover, a therapeutic action itself, which may be the chief factor of this new treatment. Dr. Bergeon states that those who have tried this method in Paris, Lyons, Geneva, and Marseilles, in cases of phthisis, have generally observed a rapid disappearance of the suppuration, with progressive improvement. Expectoration has ceased, and the only stethoscopic signs remaining are of a dry character, and due to cavities and cicatrices. In the last three months the treatment has been tried at the Hôpital St. Antoine. In two cases of asthma, an injection of carbonic acid, charged with sulphydric acid, was made half an hour after admission. The dyspnœa was decreased considerably, and the treatment

being continued, the respiration became free, and the attacks did not recur during the treatment. Nine cases of pulmonary phthisis, presenting general and physical signs of the disease, together with bacilli, were treated in the same manner. Cough and expectoration were greatly diminished, and the increase in weight was rapid—from one to two pounds a week, amounting in one instance to nine pounds in six weeks. The bacilli, however, did not disappear from the sputa.

Dr. Bergeon recommends his method in phthisis, asthma, whooping-cough, inflammation, bronchiectasis, bronchorrhœa, and pulmonary catarrh. He insists upon the greatest care in its application. The CO_2 should be absolutely pure, and prepared by the action of sulphuric acid on bicarbonate of soda. The recipient should be perfectly free from air, and great care should be taken to prevent the entrance of air at any part of the tube, its introduction into the bowel even in minute quantities being said to cause meteorism and enteralgia. Four or five litres of CO_2 charged with sulphuretted hydrogen are sufficient for an injection, which should be repeated twice daily, care being taken not to administer the gas within three hours after a meal. As regards the *modus operandi*, two very important instruments for the production of the gas and its subsequent sulphydration are figured in the *Bulletin de l'Académie de Médecine*, but practically the two points seem to be the introduction of the pure CO_2 into a five-litre bag without admixture with air, and its passage through a sulphurous solution before entrance into the bowel. Those who possess a thermo-cautère will find that, with a little ingenuity, nothing but a bag to hold the CO_2 is necessary beyond the apparatus which works the cautery. The bag being adapted to the aspirating ball of the thermo-cautère by means of an india-rubber tube, which may be kept closed by a clip instead of the more expensive tap, a rectum tube is substituted at the other end for the cautery. The bottle of the thermo-cautère being replaced by a more capacious jar holding a pint of sulphydric solution in the lower half, and leaving room for the gas above, the apparatus is complete. Upon removing the clip between the bag and the ball, and working the latter, the CO_2 is aspirated and forced through the solution, where it becomes charged with sulphuretted hydrogen, and then passes on to the bowel. I may mention in this connection that various anti-microbic treatments are being carried out in the Paris hospitals. At Laennec they are using hypodermic injections of eucalyptol, as proposed by Dr. Roussel, who claims that the bacilli are thus destroyed. In the majority of cases this has not been observed, but in one instance, which will probably be communicated to the Academy shortly, the micro-organisms, which were abundant in the sputa on admission, disappeared under treatment. Dr. Filleau claims to obtain a similar result by the use of a 1 per cent. solution of carbolic acid, of which he injects a hundred drops at each operation. No local irritation of any importance follows, if the carbolic acid is chemically pure, in the form of silky crystals. Iodoform increases daily in favor, especially where there is hyper-secretion.

On "Relapses" Following Recoveries from Overdoses of Injections of Morphine.

Dr. EDMOND SOUCHON thus writes in the *New Orleans Med. and Surg. Jour.*: The following two cases show how dangerous it is to leave too soon patients who have been rescued from the ill-effects of injections of morphine:

1. The first case is that of an old gentleman who was suffering from an attack of cystitis, and who had been taking for several days past an injection of one-fourth or one-third of sulphate of morphine every evening. One night, after he had taken his usual evening dose, he went to sleep, but towards midnight, as his breathing had ceased to be audible to his wife, she called him, but he did not answer; she tried to rouse him, but she failed, and upon turning on the light saw him motionless, pale and not breathing at all. She became more alarmed than ever, and calling up her son, she sent him after their family physician. As this physician lived some distance off, the young man, on passing my door, rang the bell and asked me to hurry at once to his father's house, as he was dying of an overdose of morphine. I hurried there, of course, and found the old gentleman lying flat on his back, with mouth wide open, features pinched, face covered with cold perspiration, with no pulse, and drawing a short ineffectual breath every twelve to fifteen seconds. I at once secured the tongue, which had fallen backwards into the pharynx, and, as I could get no assistance from any one, I held the tongue fast with one hand whilst with the other I practiced artificial respiration as best I could; I let the head hang a little low. Soon, however, a priest, who had also been sent for, arrived, and he was kind enough to hold the tongue whilst I with my two hands practiced artificial respiration more fully and more satisfactorily. Upon the arrival of the family physician, he said he could not account for this, as he was sure he had not injected more than the usual dose; he slapped the face and chest of the patient with the end of a towel wet in ice water; we gave him coffee, and injected whiskey subcutaneously. It was only after a full half hour of these combined efforts, that he would draw a satisfactory breath every six or seven seconds in a continuous and regular manner. It was fully an hour before the respiration was fully re-established and he was conscious of what was going on around him. It was about half-past one in the morning when I left him in charge of his family physician. At five o'clock I was called again by the son, who told me that their doctor had left at half-past two, but that his father was again in a deep lethargy, and to go there immediately, while he was also going for their regular attending physician. I found the patient in about the same condition as I had found him the first time, but he was not so far gone. The same means as above being employed, he was fully revived in about twenty minutes' time. I am satisfied though that he would have died then and there, if he had not been attended to properly and at the proper time. This time his physician remained with him for several hours, but there were no more relapses.

2. This second case is one of a young man about twenty-four, on whom I operated for a *colloid cancer of the zygomatic fossa.* The operation was a long, painful, and bloody one, and most unsatisfactory, the growth returning very rapidly. With the faint hope of success and to keep up the poor boy's courage, I tried to destroy the returning tumor by injecting into it pure chloride of zinc. This seemed for a while, at least, to keep the tumor in check; but one day after

returning from a trip in the country, where he had remained longer than he should have done, I found that the tumor had gained so much ground, that I injected more zinc than I usually did. This developed a great deal of pain, proportionately more than ordinarily, and to soothe his suffering I injected subcutaneously one-half of a grain of sulphate of morphine. This dose I did not consider very large for him, as he had repeatedly had one-third of a grain injected into him, and as he was in the habit of taking syrup of morphine in large doses when under too great pain. This took place at about six o'clock at night. I returned to see him again at about half past seven, the same evening. Upon nearing the house, I saw a gathering of people at the door, and I knew that surely something very bad was going on inside. Upon reaching the bedside, the patient was in complete collapse, had a small and quick pulse, breathed but feebly at long intervals; the face was pale, the features pinched, and the skin covered with a light perspiration. I immediately applied all the means described in the above case, but it took fully three hours before he would breathe often enough by himself, and before he was and remained conscious of what was going on around him. He remained that way for many hours, talking and taking some fluid nourishment, but towards two o'clock in the morning he was overtaken again by an irresistible sleep, which all the renewed efforts on our part were powerless to overcome. He gradually sank, and died at half-past five o'clock that morning.

On Recurring Venous Thrombosis Following Chronic Pyelitis of Gonorrhœal Origin.

Dr. H. French Banham thus writes in the *Lancet:* W. G——, aged thirty-four, was admitted into the Royal Berkshire Hospital, under my care, in October last, with symptoms indicative of chronic pyelitis. For the early history of the illness of this patient I am indebted to Mr. A. J. Moore. Coupling the facts given to me by him with those ascertained from the patient, there can be little doubt that in June of last year he had an attack of gonorrhœa, followed by inflammation of the prostrate gland and retention of urine, necessitating the occasional passing of a catheter. Subsequently he had cystitis, with frequent and painful micturition; and some time afterwards he began to experience severe pain in the region of the right kidney. On his admission to the hospital all symptoms of cystitis and prostatitis had disappeared, but there was considerable pain and tenderness on pressure over the right kidney, and he was passing acid urine mixed with a large quantity of pus and a few oxalate-of-lime crystals and blood-corpuscles. Notwithstanding rest and careful dieting and the administration of certain remedies, the case underwent no material change until the beginning of January last, when he experienced some sharp pleuritic pains in the right side, and there were the accompanying physical signs of a localized dry pleurisy. These shortly disappeared. There was then great tenderness over the liver, which descended a little below the margin of the ribs. During the period of these additional symptoms there was some little pyrexia and constitutional disturbance. On January 16th he had shivering, was seized with severe pain in his right leg, and when seen by me in the evening of the same day his temperature was nearly 103° F., his pulse was rapid, and he appeared to be exceedingly ill. The leg was then much swollen,

and the whole of the long saphenous vein exquisitely tender and quite hard. The man was suffering so much that no further examination was made at this time than was necessary with the view of affording him as much relief as possible. The next morning it was observed that there was tenderness extending quite up to Poupart's ligament, but no induration of the vein was noticed above the saphenous opening. After a few days the case began to assume a less serious aspect, but on the 25th there was a repetition of the symptoms that had set in on the 16th, the veins of the left leg being affected in the same way as those of the right had previously been. In this second seizure the pyrexia and pain were less. In the case of both legs the swelling and œdema affected the foot, leg, and thigh, almost up to the saphenous opening; but above this the integument appeared to be normal.

The two attacks above recorded would have appeared entirely unconnected the one with the other, but for the circumstance (ascertained on inquiry subsequently to the second seizure) that in the week intervening between the commencement of the two attacks there had been for a short time considerable enlargement of the penis and difficulty in micturition. For a week or two the patient continued in a most precarious condition, with a feeble and rapid pulse and general febrile symptoms. In a short time, however, his state became substantially the same as on admission, the urine having the same character, but the tenderness in the right flank had almost disappeared. The superficial epigastric, circumflex, iliac, and other superficial veins of the abdomen, as well as some of those in the leg, were now conspicuous by their distinctness; and the long saphenous vein, and even its tributaries on the dorsal and inner side of the foot, still remained hard and cord-like. He left the hospital in the beginning of March, and I have ascertained that for a time his general health continued to improve, but he was afterwards attacked by thrombosis of the veins of one arm, full details of which have not, however, come to my knowledge.

Some of the conditions in this case were not so closely observed as they should have been; it is possible, however, that under any circumstances there might have been some difficulty in interpreting them. The sequence of gonorrhœa, cystitis, prostatitis, and pyelitis, no doubt actually occurred. In regard to the thrombosis and endophlebitis, it is not clear which was cause and which effect; both existed on the evening of January 16th. Attention was chiefly directed to watching for its upward extension, and the sudden appearance of the same condition, or at least of thrombosis, on the left side, was wholly unexpected. I am inclined to think that thrombosis of the right long saphenous vein first occurred; that it was soon accompanied by endophlebitis; that the thrombosis extended so as to involve the right common iliac vein; that the prostatic plexus was then implicated; and so the mischief passed to the other side. These, however, are matters of conjecture. But it is curious to observe the great tendency to thrombosis that seemed in this case to exist, and which occurred, apparently, not as the result of feebleness of circulation, for the pulse was good and the patient not greatly prostrated, but, as it were, from some special condition of the blood, perhaps caused by the long-continued deteriorating influence of a purulent discharge, reducing its albumen and leaving the coagulable element in comparative excess.

Castration in Nervous and Mental Diseases.

The *Jour. Am. Med. Ass.* says: Such is the title of a symposium, in the October number of the *American Journal of the Medical Sciences*, by SIR SPENCER WELLS, DR. ALFRED HEGAR, and DR. ROBERT BATTEY. We could only expect that each of the papers singly would be of interest; and as they appear together triple interest is given to the subject.

In some respects the contribution of Sir Spencer Wells may be looked upon as a moral polemic, or philippic, against the abuse of the operation, and on this point Dr. Battey also has something to say. In view of the nature of the operation, however, too much cannot be said against its abuse. If the duties of the surgeon often lead him near the line that separates the legal and justifiable from the illegal, he should on that account be all the more cautious of overstepping this line. There has always, we may presume, been such a fascination about a new operation as to give to most of those who could handle a knife, a case of acute *pruritus secundi;* certainly such is the case now. Sometimes it has almost seemed that a new operation has been invented for the purpose of coining a new Greek compound. Of late years the good old word "obstetrician" has been metamorphosed into "gynecologist" in too many instances, and therapeutic specialties have too often taken the place of broad principles. "Groping among details is an absorbing and paralyzing occupation, and soon the curve of a pessary or the lining of a speculum fills the field of vision, and great principles are lost sight of."

It is not until we read fifteen pages of the contribution of Sir Spencer Wells that we come to know what he thinks (really) of oöphorectomy. While what he says, generally, of unnecessary operations on the reproductive organs of women is good, and has been so considered for several years, the result is really to obscure the discussion of the main question. He draws the following conclusions regarding castration for nervous diseases:

1. The operation of oöphorectomy, or removal of the normal ovaries, is one which may be advised in some cases of uterine fibroids, and in uncontrollable uterine hæmorrhages.

2. It is to be resorted to in certain malformations of the genital organs, deformities of the pelvis, and accidental obstructions of the vagina.

3. The right to use it is very limited in cases of ovarian dysmenorrhœa or neuralgia, and only when they have resisted all treatment, and life or reason is endangered.

4. In nearly all cases of nervous excitement and madness it is inadmissible.

5. It should never be done without the consent of a sane patient, to whom its consequences have been explained.

6. The excision of morbid ovaries and appendages should be distinguished from oöphorectomy, and not to be done without the authority of consultation, as in most other cases of abdominal section.

7. In nymphomania and mental diseases it is, to say the least, unjustifiable.

It will be seen that Sir Spencer Wells does not take into account the removal of *diseased* ovaries for nervous disease (except perhaps in 7), and it is in this particular point that his paper not only differs from those of Hegar and Battey, but is actually incomplete. He assumes throughout that normal ovaries are being

removed, and it is against this operation that his polemic is directed. It is to be regretted that he did not discuss the question at issue more fully.

Dr. Battey opens his paper as follows: "Within my knowledge it has not been the practice of American surgeons to attempt the cure of mental and nervous disorders by the removal of healthy ovaries or of healthy tubes. The ovaries removed, and the tubes as well, have presented signs of disease—signs which are evident to the naked eye and palpable to the sense of touch. For the misconception upon this point still existing, my own ignorance of both the histology and pathology of the ovaries is largely responsible in that, during the early history of the operation, I removed ovaries which I erroneously supposed to be healthy, and gave to the operation the unfortunate and now obsolete name of 'normal ovariotomy.'" Thus, in a breath almost, are the first fifteen pages of Sir Spencer Wells' paper disposed of. Now let us look at Battey's results. The operations under consideration, he tells us, have been done for the relief of mental and nervous disorders, which may be divided into three classes: oöphoro-mania, oöphoro-epilepsy, and oöphoralgia. He uses the first two terms instead of hystero-mania and hystero-epilepsy, because his clinical experience teaches him that these disorders are dependent upon a nervous irritation proceeding from the ovaries and not from the uterus. "I say that my clinical experience so teaches me, because (*a*) I find the disorders existing in cases where I recognize organic disease of the ovaries, and am not able to recognize any organic disease of the uterus; (*b*) in case of uterine as well as ovarian disease, when the diseased ovaries are removed, the nervous disturbance disappears, notwithstanding the fact that a displaced or diseased uterus may remain . . . In general, epileptiform manifestations have ceased at once. Some of the cases have required for a time the tranquillizing effects of the bromides to ward off threatening symptoms, whilst others have needed nothing. My cases of mania have all been quite chronic, and the improvement has been slow. In oöphoralgia, in a few cases the cure has been immediate and permanent. In the majority it has been slow and gradual; and in others nothing has been gained for even two years after the operation. In a few of these cases the long-established opium habit has proved a complete bar to recovery." Of his cases which have had two or more years to test them 7 were cases of oöphoro-mania, with 1 cured, 4 improved; 9 cases of oöphoro-epilepsy, 9 cured; oöphoralgia 20, 13 cured, 3 improved, 4 not improved. The cases of oöphoro-epilepsy were cured promptly and completely.

Dr. Battey's results are thus seen to directly controvert the last of the conclusions drawn by Sir Spencer Wells. As the others relate to the excision of normal ovaries, it is obvious that they cannot be discussed, except to say that they are almost foregone conclusions. But let us look at the array of authorities, quoted by Battey, which show that removal of *diseased* ovaries is justified in mental and nervous diseases. Dr. Wm. H. Byford says: In looking over my cases I find that all my patients on whom I have operated for nervous disorders were greatly benefited. Three years ago I did this operation for an aggravated form of nymphomania. The patient is now cured of her terrible malady. In a case of double oöphorectomy for the relief of prolonged invalidism attended by headache of indescribable severity, the operation was an entire success. This patient, four years before the operation, was insane for several months. It is

now five years, and the patient remains in good health. I entertain no question that the operation is entitled to a legitimate place in surgery for desperate nervous conditions. Dr. Mann, of Buffalo, reports two operations for oöphoralgia, done more than two years ago, both cures. Dr. Sutton says: "I have observed in many cases that when marked nervousness existed, it either entirely disappeared or was greatly lessened after removal of the ovaries and tubes." Dr. Wm. T. Howard reports a case of hystero-epilepsy (oöphoro-epilepsy), operated on three years ago, now cured. Dr. H. P. C. Wilson says: "In my hands the operation of castration in women for nervous and mental diseases has been most satisfactory; all the cases that I and my son, Dr. Robert T. Wilson, have operated on for the above conditions have either been much benefited or entirely cured." He mentions one case of hystero-epileptiform convulsions, of several years' standing, which was entirely cured. Dr. Goodell says: "After the lapse of many years my cases of oöphorectomy for insanity, for hystero-mania, hystero-epilepsy, and pelvic neuralgia, show positive and permanent benefit. I can recall but two failures, and those were two cases out of eight of insanity or threatened insanity. The remainder, six in number, were cured. A ninth case, a dreadful one of hysteria, menorrhagia and dysmenorrhœa, had two attacks of insanity after removal of her ovaries." Dr. T. Gaillard Thomas says: "For all nervous and mental disorders in women which are created or markedly aggravated by the process of ovulation, I regard castration as a most valuable resource." His experience with the operation for purely nervous and mental disorders extends to five cases: A case of insanity (menstrual) cured, a case of hystero-epilepsy cured, a case of menstrual epilepsy cured, and two cases of epilepsy not improved. "Castration of the female for nervous diseases has, in my opinion, a brilliant future before it, and yet, I feel that in this and in other conditions it is now being greatly abused by resort to it in entirely inappropriate and unnecessary cases." All the writers quoted express the fear that the operation will be abused, and think its field limited.

We have but little space in which to speak of the admirable paper of Professor Hegar, in which he discusses the subject both scientifically and practically. "Castration is indicated in a psychosis evoked or maintained by pathological alterations of the sexual organs, and in a neurosis originating from the same source, as soon as this imperils life or hinders all occupation and all enjoyment of life. The indication is also present when the disease represents only one causal factor in the genesis of the affection, without the removal of which a cure is not to be thought of. Of course, also, the remaining causes of suffering must be in this case accessible to treatment. Other milder methods of treatment must have been tried previously without success, or, as in the case of many small tumors of the ovaries and tubes, must from the outset give no promise of success. Castration must actually affect the cause which occasions or keeps up nervous irritation. The operation will thus be of use when a degenerated or dislocated ovary represents the irritative focus, or as soon as a greatly swollen and retroflected uterus presses on the sexual plexus and the organ is brought into a state of atrophy. Castration promises success when the bleeding and anæmia occasioned by a fibroma play an important part in the maintenance of a psychosis, so that a cure does not appear possible without getting rid of that evil; but castration is absolutely no universal remedy for any neurosis originating from a

genital-organ disorder, or kept up by the same. The cessation of ovulation will avail nothing if the irritation starts from the nerves which are compressed in a shrunken cicatrix of the broad ligament, or elsewhere in a cicatrix of the pelvic connective tissue." Altogether, it may be said that no previous paper has appeared in which this subject has been so thoroughly and impartially discussed, in all its bearings, as in the contribution of Dr. Hegar.

Intra-Pulmonic and Bacillicide Medicator, with Set of Spray Apparatus for Broncho-Tracheal and Subglottic Medication.

Dr. WADE MINOR LOGAN thus writes in the *Cin. Med. News* for November: As may be readily inferred, the application of bacillicide, or other local treatment to the ulcerated surfaces of tubercular cavities within diseased lungs, and of pulmonary abscesses, with the device which I propose, involves an operative procedure through the chest-wall overlying the lowest portion of the diseased part.

While some operative procedures, which consisted principally in the injection of various medicated liquids into lung cavities, have one time and another been practiced, without brilliantly successful results, to be sure, they have accomplished much good in some cases in which "the expectoration and general symptoms have for a time abated," while "the operation is less mischievous than might have been expected."*

Our thanks are therefore due to Baglivii (1696), Barry (1727), Richter (1803), Ramadge (1836), Hastings and Storks (1845), Koch and Mosler (1873), Pepper (1874 and 1881), and Fenger and Hollister† (1881), for the genius and courage with which they demonstrated beyond controvery the safety‡ and utility of such treatment.

I thus mention briefly the history of thoracocentesis pulmonis, sufficiently to show that it is, all things considered, fully as safe as any, except the most hazardous operations; its occasional abandonment being due to imperfect apparatus and limitation of skill.

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* See Stillé and Maisch's Dispensatory, Third Edition, 1884, p. 836.

† The very interesting, instructive, and successfully managed case of Drs. Fenger and Hollister was one of "Large Fœtid Abscess Cavity in Middle Lobe of Right Lung Caused by Suppuration Around a Large Echinococcus Cyst of Twelve Years' Standing;" its chronicity and other features terminating in "perfect recovery," going far to show the tolerance and recuperative power of the lung tissues. (See *American Journal of the Medical Sciences*, October, 1881.)

‡ In regard to the matter of safety, there can not, of course, be any danger in the use of this apparatus as proposed. To be sure it is not an uncommon occurrence for a phthisical patient to feel remarkably comfortable for a time, and die suddenly; and, if his demise should happen during or soon after an operation of any kind, there would be doubtless persons ignorant or bigoted enough to attribute his decease to the operation. Such a fatal termination of the patient's life, liable to occur at any unforeseen moment in cases of consumption, ought not to argue anything against the operation *per se*, especially when made by physicians of learning and experience.

I was once listening with a stethoscope applied over the scapula, to the breathing of such a patient, when he suddenly and unexpectedly fainted. As he had never fainted before, the ignorant people about him, who had never seen such an instrument as the stethoscope employed till then, attributed the cause of the spell to its use, and censured me severely for using "such an infernal thing upon him."

A study which I gave this subject nearly thirteen years ago, after reading the exceedingly interesting experiments of Drs. Koch and Mosler, published at that time, suggested to my mind a method of treating lung cavities, which I have good reason to believe will succeed in a large proportion of cases.

As I have stated before, the principal feature of all direct medication of lung cavities in the past has been the injection of medicinal solutions. And our learned and greatly admired fellow-countryman, Dr. Wm. Pepper, of Philadelphia, revived with encouraging success, in 1874, local treatment, using a delicate canulated needle attached to a hypodermic syringe, and introduced through an intercostal space.*

However "good, bad, or indifferent" may have been any of the solutions that were used by injection, certainly no really brilliant results could reasonably have been expected, because it is quite obvious that their utility, owing to gravity, was *necessarily limited to the lower parts of the cavity*, with, of course, the point opposite to the nozzle of the syringe, if injected forcibly enough to reach across to it, unless the patient were additionally inconvenienced with sufficient of the fluid to fill the entire excavation.

Now, according to the method which I propose, bacillicide, antiseptic, local stimulating, or other topical remedies may be applied thoroughly and evenly with what I choose to call an

INTRA-PULMONIC AND BACILLICIDE MEDICATOR.†

An instrument which I have invented and had made for this purpose consists of a fine canulated, gold, iridium-pointed needle, three and one-half inches long, perforated with seven diverging capillary openings on one side, radiating equally in a row, occupying slightly less than one-fourth of an inch in length, beginning as close as possible to the point. More rows involving a larger number of openings might seem preferable, but owing to the necessarily delicate caliber within a tube of availably small diameter, such an increase in the number of holes would render the instrument impracticable and inoperative, as I have ascertained to my satisfaction, as well as cost.

Adjusting this tube as a tip to an ordidary Richardson's atomizer, connected, by a strong hose, with an air receiver containing an atmospheric pressure of fifty pounds or more to the square inch, and introduced at a safe point through the chest wall, as close as possible to the floor of the cavity‡ (see Fig 4) or abscess to be treated, the solution in the fluid holder may be thrown in a very fine fan-shaped spray, longitudinally in all directions (to and fro—simultaneously), upward to bathe the top, front, and back, while, by a slight rotary motion, the sides

* (See *American Journal of the Medical Sciences*, October, 1874, and *Transactions of American Medical Association*, 1880.) In the latter volume (page 259), Dr. Pepper six years later says: "It will thus be seen that more extended experience has amply confirmed the concluclusions reached in 1874."

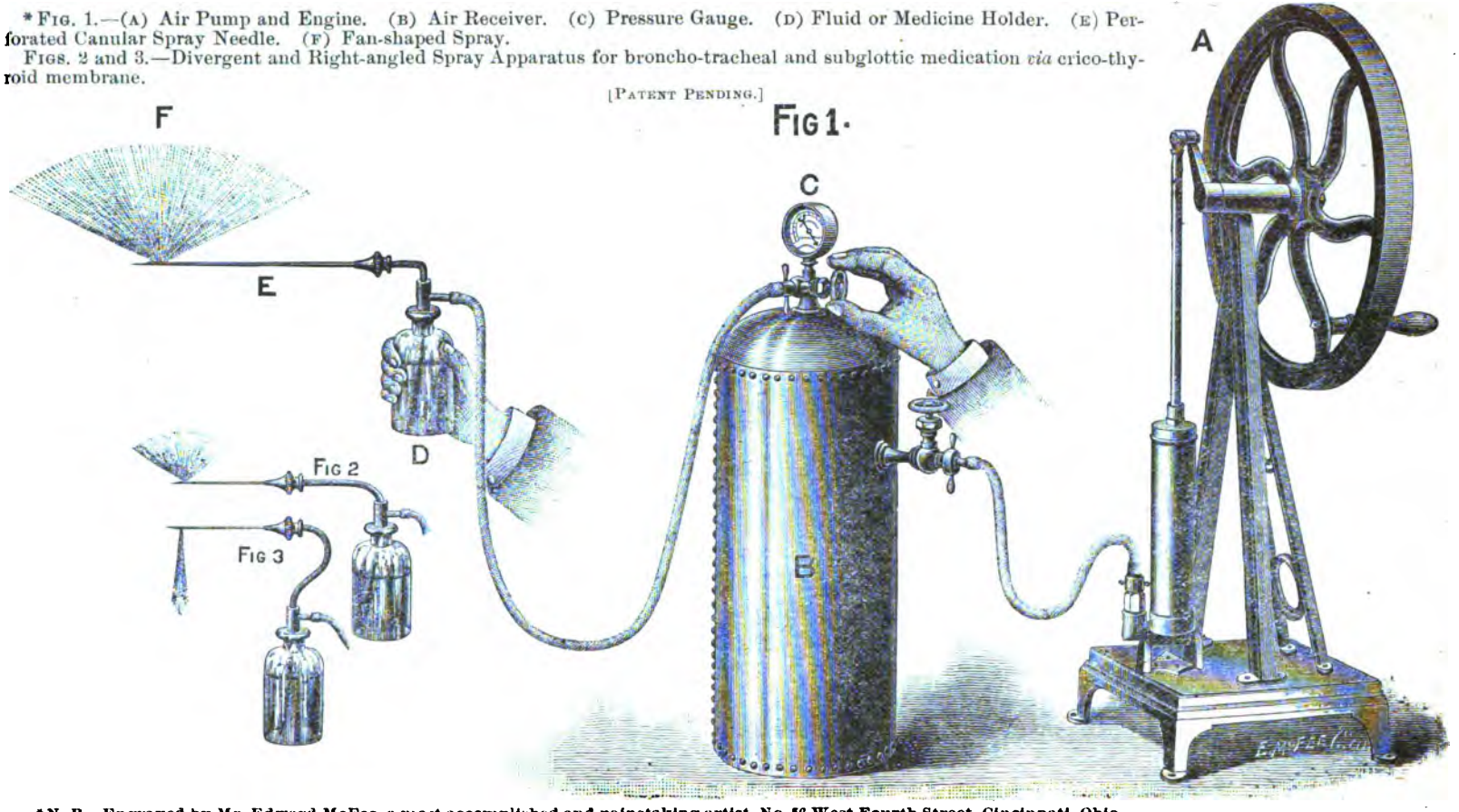
† See Fig. 1. Since it was engraved, I have devised an automatic cut-off attachment to the spray apparatus, to be conveniently controlled by the operator, thus dispensing with the hand which it substitutes at the air receiver outlet.

‡ A bright-looking Granger, with an evident predilection for humor, after examining the apparatus critically, remarked: "Pardner, you are going to cure consumption now; you have found out the tools with which to tackle it where it roosts."

*Fig. 1.—(A) Air Pump and Engine. (B) Air Receiver. (C) Pressure Gauge. (D) Fluid or Medicine Holder. (E) Perforated Canular Spray Needle. (F) Fan-shaped Spray.

Figs. 2 and 3.—Divergent and Right-angled Spray Apparatus for broncho-tracheal and subglottic medication *via* crico-thyroid membrane.

[Patent Pending.]



*N. B.—Engraved by Mr. Edward McFee, a most accomplished and painstaking artist, No. 56 West Fourth Street, Cincinnati, Ohio.

of the vomica would receive thorough treatment, the fluid accumulating from the spray on the walls above, flowing down to medicate its base.

The next point to which I invite attention is the question of

FIG. 4.

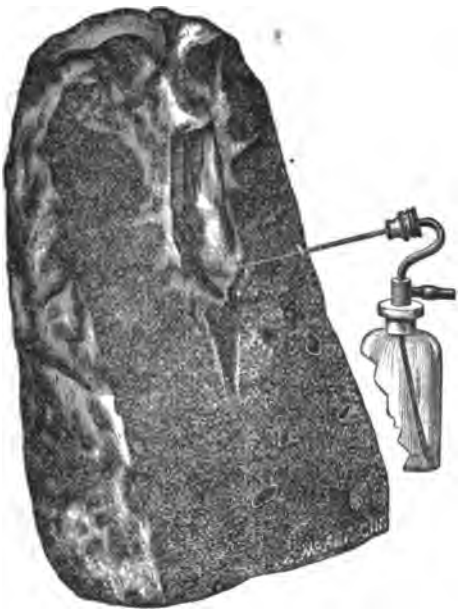


Fig. 4 shows the instrument and spray introduced into a lung cavity.

PULMONARY TOLERANCE.

Notwithstanding the sophistic allegation that the lungs, when once affected, can not be cured, or "reached by medicines," the following well-authenticated facts and observations show that the pulmonary, like the other structures of the body, are not unfrequently remarkably tolerant of injury, the result of disease or accident, and have great recuperative power in persons of naturally good vitality and previous good habits.

I have already mentioned a number of skillful men who have demonstrated this tolerance by safely and advantageously injecting fluid medicines into lung cavities. Still greater instances of it are beautifully illustrated by Figures 5, 6, 7 and 8.

"A man, aged fifty, died on the seventh day of an attack of typhoid fever. Fourteen years before he had been treated in the same hospital. At that time he had infiltration of the right apex, extending down to the third rib, hæmoptysis, etc. From this attack he entirely recovered [see specimen of healed pulmonary consumption, Fig. 6,] followed his business, and during the years just before his death enjoyed excellent health, without any further indications of lung trouble." —*Dr. George Edward Rindfleisch, in Ziemssen's Cyclopœdia of the Practice of Medicine*, 1875, Vol. v., p. 684.

Figures 7 and 8 are contained in Watson's Practice of Physic, 5th Edition, 1872, Vol. ii., p. 220; Jones and Sieveking's Pathological Anatomy, 1875, p.

505; Gross' Pathological Anatomy, 3d edition, 1857, pp. 433 and 434; and numerous other treatises on practice and pathological anatomy, which should be carefully studied and mastered by men pretending to speak authoritatively, before pronouncing all such cases necessarily, and inevitably, incurable.

FIG. 5.

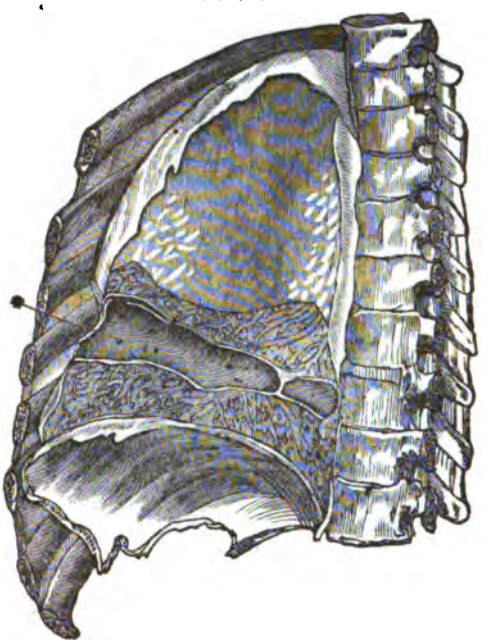


Fig. 5 shows the track of the ball in a gun-shot wound through the right lung perfectly healed and lined with firm scar-tissue. Taken from a preparation in the Army Medical Museum at Netley. (See Holmes' System of Surgery, by Packard. 1882, Vol. iii., pp. 490 and 491.)

FIG. 6.

Fig. 6. Section through a specimen of "Healed Pulmonary Tuberculosis."

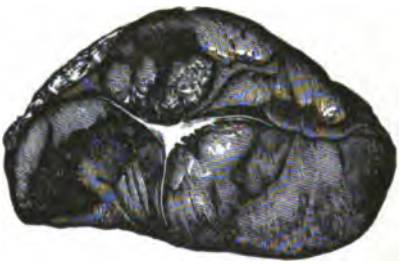
Apropos to the question of pulmonary tolerance, I quote here the following observations in regard to

"EXTIRPATION OF THE LUNG.

"Dr. Domenico Biondi, of Naples, some time since proved that animals recovered after removal, by operation, of one entire lung. In a more recent communication, published in the *Wiener Medizinische Jahrbücher*, the same physician shows that animals may survive the removal of portions of lung artificially infected with tubercle. After injecting, by Ehrlich's method, masses of bacillus tuberculosis into the parenchyma of the lung, so that the clinical and anatomical symptoms of tubercle were produced, he removed, at the end of a few weeks, the diseased lung; and in all cases recovery was complete . . . . Bearing in mind the surgical procedures performed with success in this country, that were considered impossible, and then unjustifiable, it is hardly unreasonable to believe that excision of the lung is an operation of the distant, if not of the immediate future."—*British Medical Journal*, quoted in *Cincinnati Medical News* of March, 1886, p. 200.

FIG. 7.

FIG. 8.



Figs. 7 and 8 represent specimens of arrested consumption of the lungs; the former, an internal section of the summit of the left lung, showing a large cavity, the result of tubercular consumption, cured and lined with scar or cicatrical tissue: the latter, a "Cicatrix at the apex of a lung, resulting from the previous arrest of tubercular disease."

Suif reports a case in which he "cut away from a man two of his ribs, making an opening into his chest capable of admitting the fist, and of the removal, with complete success, of a portion of diseased lung,"—(See *Gross' Surgery, Sixth Edition*, 1882, Vol. 2, p. 1072.)

The following interesting and successfully treated case of abscess of right lung is recorded by Dr. W. S. Cline, of Tom's Brook, Va.:

"In 1866, I was called to see a consumptive patient of my brother's, and found an abscess, as I thought, between the sixth and seventh ribs. I opened it and over one pint of pus escaped, with no signs of abatement; I called for some lint with which to stop the flow, got on my horse and rode to consult my brother, telling him I had struck a fountain of 'matter.' When he arrived, we pulled out the plugs and over a half a gallon [*sic*] more pus escaped. Our patient made a rapid recovery, and is living to-day, minus his right lung. His body inclines to the right and that shoulder is lower."—*Med. World*, June, 1886.

A most extraordinary case of this kind is recorded by Dr. Milton Antony, formerly of Augusta, Ga., who was called in consultation with Dr. Jno. Pugsley, then of Jefferson county, Ga., in the *Philadelphia Journal of the Medical and Physical Sciences*, vol. vi., 1823, pp. 108 to 118.

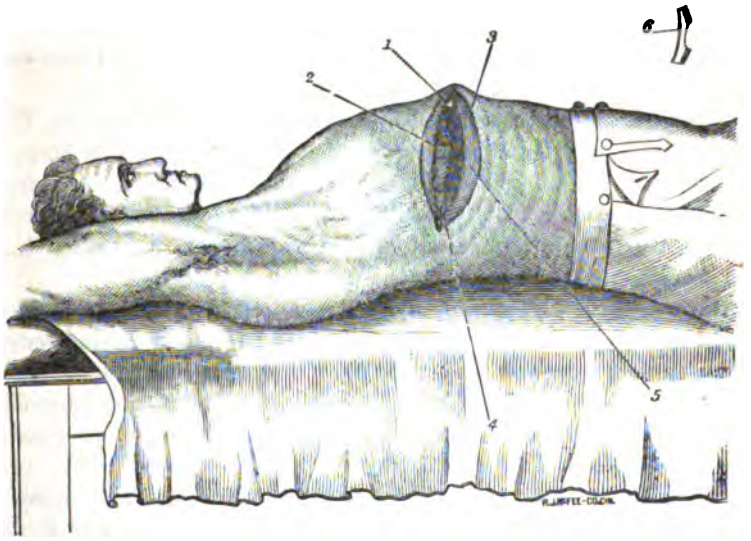
On the 3d of March, 1821, the physicians above mentioned visited Elmon Allen, aged seventeen years, who presented substantially the following history: "Between two and three years before, he had, by a fall from his horse, received an injury on the right side, whereby the sixth rib was believed to have been fractured . . . . . The local irritation and ecchymosis measurably, though not entirely abated, and, during the two years next following, he was frequently able to walk or ride without serious inconvenience. Several times, however, during this period, he was, in consequence of irritation and tumefaction produced in the injured part by over-exertion or accident, forced to keep his bed for days, and sometimes for weeks. Such at one period was the inflammation that a blister was raised on the part. Thus the case proceeded until about the end of 1820, when the pain in the part became distressing. Soon after this a pungent and extremely severe pain was fixed at the vertebral and sternal articulations of the injured rib. So great was the local irritation that a constitutional disturbance was excited, and a fever of hectic type ensued. This continued with severe pains at the extremities of the sixth rib, with a *cessation of pain in the wound*, which was followed by an *unpleasant feeling of weight and distension*. About this time it was observed that there was little or no motion in the right side of the thorax in respiration. . . . . I found the patient in good spirits, though considerably emaciated, and had not rested at night for some length of time without laudanum.

Respiration was laborious, with much exertion and dilatation of the nostrils at each inspiration. . . . No more respiratory motion was perceptible in the right side than appeared to be the effect of the repeated inflation of the left lobe [lung] [p. 109], and consequent motion of the parietes of the left side, to which the parieties of the right were attached . . . . . The tumefaction of the part was in the direction of the ribs, extending from the sternum to the anterior edge of the latissimus dorsi—about two inches in width and one in height at the most elevated point, which was several inches immediately over the injured part of the sixth rib. The skin covering the tumor was entire and without discoloration or change of appearance, except a slight enlargement of the superficial vessels. . . . . I commenced my incision at the sternum and extended it freely through the super-incumbent integuments, immediately over the space between the fifth and sixth ribs, down to the lower end of the tumor . . . . A copious discharge followed, not of pus, for not a particle of purulent matter was observed, but a kind of grume and old red coagula intermixed with dense coagula

of lymph, resembling irregular fragments of membranes [p. 110]'. . . . . Having detached those [carious] portions of the fifth and sixth ribs, and my opening through the bony structure of the side being free, I proceeded to remove the grumous and coagulated matter within the ribs [p. 111] . . . . I immediately determined on making an examination, with my fingers, for the lungs, by penetrating as deep into the substance beneath as I could without resistance, . . . and to my utter astonishment and mortification, I was able to *penetrate the right cavity of the thorax, with my first and second fingers, in every direction* to the full depth of three and a half inches, without any resistance, more than the pulpy substance before described was calculated to give, except occasionally meeting with more or less disorganized fragments of *bronchial tubes*, all of which tended plainly to prove to me that *the substance of the right lobe* [lung] *was extensively destroyed* [p. 111.] . . I will here observe that in this examination *no respiratory motion was perceptible to the fingers.* One minute's reflection dictated to me the only course which could possibly be pursued, and which I immediately adopted. It was, carefully to take away, with my fingers, all the parts within my reach, which were removable without violence or the danger of producing hemorrhage in the event of my reaching near any sound vessel. The result of this was the

FIG. 9.*

EXCISION OF PORTIONS OF THE FIFTH AND SIXTH RIBS.



1—The sternal fragment of the fifth rib. 2—Its vertical fragment. 3—The sternal articulation of the sixth rib. 4—Vertical fragment of the sixth rib. 5—Retracted cut edge of the wound. 6—Represents the removed fragment of the fifth rib.

removal of all the disorganized parenchyma of the lungs within the reach of my fingers (judged to be between one and two pounds [*sic*] in weight), carefully cleansing it from between and around several of the branches of the bronchial

* Engraved by R. J. McFee & Co., an obliging and reliable firm of Cincinnati artists.

tubes, which appear to have retained their texture with more tenacity than their surrounding parts . . . . . I then cleansed the wound carefully, which had the appearance represented in the annexed plate [see Fig. 9], introducing large pledgets of lint between the cut edges (which were themselves considerably retracted), for the purpose of keeping the opening as free as possible for the exit of offensive matter. The dressing was finished by covering the wound with a plaster, and applying a roller so tightly as to prevent the motion of the ribs, causing respiration to be performed by the diaphragm chiefly [p. 112] . . . . On the ninth day I received information that he was considerably better; that the discharge from the wound had, since my visit on the fourth, been much more free, and that there was *perceptible respiratory motion in the right side* [*italics ours*]. On the eleventh day I was informed by letter, that the symptoms were generally favorable: the wound looked well, mattered freely, slight fever every day, appetite pretty good, has an alvine evacuation daily without medicine [p. 113]. . . . . April 24th [p. 115], the patient remains easy and has continued to mend to the present time. Respiratory motion is as free in the right as the left side, as far as the fifth rib, below which there is not the least appearance of it."

"On the 6th of May [sixty-four days after the operation] I again visited the patient. His general symptoms were still better. He had, at that time, so far recovered and improved in health as to possess all the *fullness of habit* of his ordinary state. His strength had so far returned as to enable him to exercise on foot freely about the yard, and he felt able and desirous of walking to some place in the neighborhood, half a mile distant, but was not allowed to exceed the limits of the yard. In short, he was able to sit and walk about the house and yard, twelve hours out of the twenty-four, with much facility" [p. 115].

In his "sequel" to this most interesting and remarkable case, Dr. Antony states [p. 118] that shortly after his last visit to the patient, in May, "he went out some two or three miles to church; and, soon after this, I was informed that he had taken the measles, from which it was believed he had recovered, though his general health was left impaired, and in which state it continued, gradually becoming worse, until the 11th of July, on which day he died."

Whether or not this patient would have recovered (which he certainly bid fair to do) had it not been for the attack of measles (which, as an intercurrent complication in such a case, would not be otherwise than extremely dangerous) we cannot, of course, determine. I reproduce this account of it, condensed as much as possible, as going so far to show that, in some cases, there is a greater degree of pulmonary tolerance than is generally supposed.

Most physicians of considerable practice have doubtless had occasional vexatious cases of bronchial, diphtheritic, inflammatory, some syphilitic, and other diseases of the sublaryngeal air passages, in which the results of all forms of treatment available were far from satisfactory. With, however, the single and fan-shaped spray apparatus which I propose, delineated in the abstract by Figs. 2 and 3, and operating *in situ via*, the crico-thyroid membrane in Fig. 10, I believe many of these cases may be directly medicated, easily, safely, advantageously, and with precision.

As this article is already considerably longer than I had anticipated, I will forego, at present, any extended discussion of the various medicinal agents that

may be employed in this way, reserving any remarks which I may have to offer upon

RESPIRATORY THERAPEUTICS

for an article in the future. I will, however, task the forbearance of the reader a little further, in order to suggest to those who may have an opportunity to determine their practical value, the experimental laboratory observations of Korab, who claims for

FIG. 10.

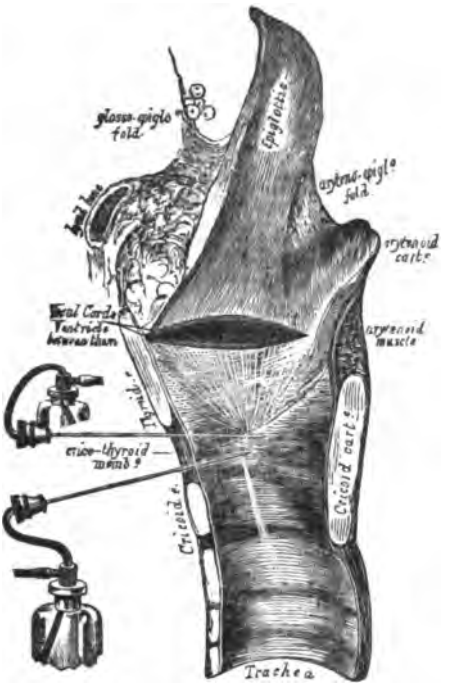


Fig. 10 shows the broncho-tracheal and subglottic spray apparatus (also Figures 2 and 3)—which may be turned to spray in any direction—inserted through the crico-thyroid membrane, and spraying down towards the bronchia, and up against the under surface of the vocal cords.

HELENIN

"a power of destroying bacilli, and especially those of tubercle." (See Stillé and Maisch's Dispensatory, Third Edition, 1884, p. 825; Bull. de Thérap., ciii. 271; and Brunton's Pharmacology, Therapeutics, and Materia Medica, 1885, p. 813.) If they are correct, this agent may prove to be a valuable local adjuvant to the constitutional and other treatment of consumption.

In conclusion, I would remark that I offer these devices to the studious, progressive element of the medical profession, for whatever future experience may prove them to be worth, regretting that I have not so far had opportunity to thoroughly determine their practical value. Of course, such radical innovations, although having in their favor undisputably the arguments of safety and practicability, can seldom be introduced into practice elsewhere than in public hospi-

tals. There the poor charity patients are quite favorably and wonderfully impressed by the wielder of the (to them) extraordinary instrumental appliances, acquiescing readily in their use, as they fancy how little the "common doctors" outside know about such things. And it is largely through these humble unfortunates (usually to their own decided physical advantage), that the middle and wealthier classes (who in their own cases will not tolerate the use of untried novelties) have to be made familiar with and reconciled to the employment of whatever remarkable new procedures are devised and introduced into practice.

I must therefore be contented for the present with placing these inventions before those of my more favored professional brethren whose social predilection and preferment, with influential affiliations, render them allegedly "available" for hospital and professorial positions, hoping at least that the opportunities afforded for their application may be successfully improved in the not very distant future.

VI. OBSTETRICS, DISEASES OF WOMEN AND CHILDREN.

Carbolic Acid for Scarlatina.

Dr. WIGLESWORTH, *Deutsche Medizinal Zeitung*, has used carbolic acid in 100 cases of scarlatina without having a single death, and in only two of them was there albuminuria, which he asserts was in no way due to the treatment. He gave 0.20 centigramme doses dissolved in 30 grammes of water flavored with chloroform and bitter orange. After 36 or 48 hours of this treatment the urine was usually discolored.

Biniodide of Mercury, a Specific and Prophylactic for Scarlet Fever and Diphtheria.

Dr. C. R. ILLINGWORTH thus writes to the *British Medical Journal:* In your issue of May 1st, you inserted a communication of mine relative to the biniodide of mercury as a specific for scarlet fever and diphtheria.

That it is a true specific for the former, is proved by the defervescence commencing immediately upon the administration of the medicine, instead of upon the fifth day, and by the absence of desquamation in consequence. That it acts as a specific in the latter, is shown by the rapid disappearance of the membranous effusion and reduction of temperature. The efficacy of the medicine depends, I think, upon the diffusible potassic iodide carrying the germicide biniodide to every portion of the circulation. Prescribed in this form, the biniodide of mercury has not, so far as I am aware, been used before for these diseases.

Dilatation of Os Uteri by Tamponing.

Vulliet, of Geneva, (*Giornale Internazionale delle Scionze Mediche*) states that he has been able to examine the entire internal surface after dilatation by his method—he has even been able to take a photograph of the cavity as well as interesting models. First, he places the woman in a genupectoral position, the buttocks much raised, and the perineum and posterior vaginal wall as high as possible. To begin the dilatation he uses first a urethral sound, or bougies of various sizes, according to the stenosis or the resistance of the organ. To the introduction of these instruments succeeds small wads of iodoformed cotton, whose number is gradually increased, and which are ordinarily allowed to remain for forty-eight hours. Sometimes to prevent pains, and make the dilatation more regular, he uses a small laminaria tent, which is left in position for only twenty-four hours, and afterwards iodoformed cotton is applied as before. Proceeding thus in a regular manner, after nine or ten days to five weeks, according to the patient, complete dilatation takes place.

Prognosis of Sex of Fetus.

Dr. D. T. SMITH thus writes in *The American Practioner and News:* The number of fetal pulsations per minute was taken and recorded in sixteen cases, with a view of ascertaining its bearing upon the question of prognosis of sex, with the following results: One hundred and thirty-five was taken as the uncertain number or dividing line of the two sexes. Twelve exceeded this number, and four fell below it. Of the four falling below, two were boys, 126 and 123, and two girls, 132 and 126. Of the twelve exceeding this number, five were boys, 136, 148, 142, 146, 150, and seven girls 146, 141, 147, 139, 142, 136, 156.

In regard to the question of weight, though only four were weighed, the result was equally unsatisfactory. One boy, with a pulse of 142, weighed nine pounds, and one of 146 weiged only a little less, and one of 150 weighed eight and a quarter pounds.

As illustrated by these figures, the method is altogether without certainty, but perhaps somewhat better than guessing.

Puerperal Tetanus.

Dr. W. NETZEL related the following case at a meeting of the Swedish Medical Association (*Hygeia*). A primipara, twenty-five years old, was sent to the obstetrical clinic thirty-six hours after labor pains had begun. The fœtus was dead and was strongly engaged in the pelvis. The os was only slightly dilated and very rigid. The fœtus was extracted after perforation of the head, and the uterine cavity was then washed out with a three per cent. solution of carbolic acid. At the end of four days the body temperature began to rise, and the discharges acquired a foul oder. On the eighth day there appeared trismus and rigidity of the neck, and then followed opisthotonos and tetanic convulsions, and the patient died in two days. The autopsy showed a rupture of the cervix, the tear extending so as to involve the peritoneum. There was parenchymatous degeneration of most of the internal organs. The brain, spinal cord, and meninges were markedly hyperæmic. The author regarded the tetanus as symptomatic of a general infection received by the patient during the first stage of labor.

Paralysis Consequent on Parotitis.

In the *Frogrès Médical* of November 20th, M. A. JOFFRAY described a form of paralysis resulting from parotitis, or mumps, in the same manner as from diphtheria and other infectious diseases. It affected all four limbs, beginning, apparently, in the lower, and extending to the upper; the latter, however, being less markedly disturbed than the former. The paralysis was preceded by pains of a lancinating and constricting character, and became manifest about twenty-one days after the onset of the causal disease. It was associated with abolition of the reflexes—knee and plantar. The muscles failed to respond to faradic or galvanic excitation. This was the case not only with the muscles completely beyond volitional control, but also with those still capable of being influenced to some extent by the will of the patient. The sensibility of the muscles was increased, any slight pressure on them causing pain, whilst the sensibility of the skin itself seemed impaired. The special senses were intact. There was slight albuminuria, but no other disorder of the urinary function. Cure was effected,

in the case of a child aged 4½ years, in the course of four months, by the administration of iodide of potassium.

Vaccination from a Syphilitic Child without Syphilitic Infection.

Dr. CHARLES ROSEWATER, of Omaha, Neb., writes to the *Med. Record* that in reading a note on syphilis from vaccination in a recent issue of *The Medical Record* he was reminded of a case which Dr. Fürth related last winter in the Polyclinic at Vienna, Austria. When he was in charge of the Foundling Hospital there he vaccinated a number of children one day from the arm of a child which at the time was apparently healthy. Several days later the latter broke out with a syphilitic eruption. The children vaccinated from it had already been distributed to various points in the country, but Dr. Fürth, feeling the great responsibility resting upon him, took special pains to hunt up each child and keep it under observation for some time. Not one of the children vaccinated from the syphilitic child had syphilis or showed any signs of it during the several months that it was watched. Reasoning from this case Dr. Fürth concluded that vaccination with the pure lymph from a syphilitic child will not produce syphilis, and that it is only when blood has been mixed with the lymph that syphilis is imparted in vaccination.

Intra-uterine Disinfection.

The *Med. News* says although the whole medical world has reason to thank Koch for the announcement of his discovery, in 1881, that a solution of bichloride of mercury, of the strength of 1 : 1000, was absolutely fatal to the hardiest forms of microbes and their spores, and while this antiseptic agent has given brilliant evidence of its efficiency in obstetrics, it has not, unfortunately, shown itself to be the ideal disinfectant, fatal to the infecting parasites, but innocuous to their host. It is now clearly proven that the danger of fatal poisoning after the use upon absorbent surfaces of a solution of the strength already mentioned is by no means slight.

Having employed it extensively, and seeing no bad consequences, CARL BRAUN, of Vienna, recommends that a solution of thymol, also 1 : 1000, be substituted for corrosive sublimate in intra-uterine injections, not only directly after delivery, when the danger of absorption and poisoning is, of course, greatest, but also later in the puerperium in those cases in which there is decomposition of retained fragments of the placenta, or membranes. In such cases the uterine walls are scraped with a curette, the thymol solution is injected, and a bougie of iodoform is inserted into the cervical canal, this plan of treatment giving the most excellent results.

Manganese as an Emmenagogue.

The *New England Med. Mo.* says: After some months of experiment we are now better able to estimate the true value of manganese in menstrual suppression, and to define more clearly its general properties. Reports heretofore published would convey the impression that it is far superior to other emmenagogues, and has a wider sphere of usefulness, being applicable to varied conditions of the pelvic organs. A few months' trial, however, has served to demonstrate

the falsity of such statements, and to give the drug its proper standing among remedial agents. This class of drugs is notoriously unreliable, and for this reason, namely, that amenorrhœa is but a symptom which is common to many affections, and we can hardly expect an agent which has a definite action to adapt itself to so many varied conditions. Manganese is of considerable value in many cases, and so are aloes, senecin, iron and a host of other remedies, yet the proportion of failures is almost as great as the successes experienced with them The drug in question is hardly adapted to continuous use, as in moderate doses it often produces considerable gastro-intestinal irritation, and there is at times an undue susceptibility to its action. It is but fair to state, however, that this drug is a valuable addition to our therapeutic agents, and is adapted to many of the cases in which other plans of treatment were ineffectual.

The Value of External Applications in the Treatment of Children—Effects of Cold Water.

The *Med. Age* says when one hand is immersed in cold water, the temperature of the other hand also falls. Cold not only cools the surface of the body, but affects markedly the condition of internal organs through the nervous system, especially in children.

BROWN-SÉQUARD has shown, by experiment, that cold applied to the lumbar region contracts the arterioles of the kidney, and consequently diminishes the blood-supply to those organs. When cold water is applied to the surface of the body, the *cutis anserina* immediately becomes manifest, the skin becomes paler, the respiration is sobbing, and the pulse is quickened. If the temperature be not too low, the condition of reaction soon supervenes. The coolness is succeeded by a feeling of warmth, and the depression by a feeling of exhilaration. The bath should not be continued too long for this tonic effect.

If the tonic effect is well shown, the circulation is equalized and invigorated, tissue metamorphoses take place more rapidly, and with the increased tissue changes and activity of assimilation the appetite is increased, and the body gains in weight and strength.

The cold bath should have a temperature of from 40° to 70° F.—*Exchange.*

Treatment of Thread Worms in Children.

A writer in the *Practitioner* says: The complete cure of thread worms in children is often very difficult. While the ordinary methods used, such as rectal injections of salt and water, infusion of quassia, and other remedies, do good for a time, yet they often fail to relieve the attendant symptoms of "worms," symptoms usually very irregular, and in some cases severe in character. In many cases, though the irritation about the anus is removed by injections, the irregularity of the bowels and the disturbance of sleep remain the same. This is probably due to the fact that the habitat of the worms is higher up in the large intestine, where no remedy introduced into the rectum can reach them.

In many cases I have found that rhubarb in small doses brings away large numbers of worms, and at the same time regulates the bowels; so that the use of injections may in most cases be dispensed with. The formula which I have found most useful is as follows, varying slightly with the age of the child:

℞. Tincturæ rhei . . . . . 3 min.
Magnesii carbonatis . . . . . 3 grs.
Tincturæ zingiberis . . . . . 1 min.
Aquam . . . . . 1 dr.

This is to be taken twice or three times daily, according to the effect on the bowels. Whether the rhubarb acts as a vermicide or by simply "moving the worms on," I am unable to say.

Corrosive Sublimate in Midwifery.

At a recent meeting of the Obstetrical Society of London, an important paper was read by Dr. DAKIN "On Mercurialism in Lying-in Women." He spoke of certain toxic results which might follow the routine use of douches of solutions of corrosive sublimate (1 part in 1,000, or 1 part in 2,000, of water) after delivery; his observations had been made when he was resident medical officer at the General Lying-in Hospital, during the tenure of office of Dr. John Williams and Dr. Champneys as physicians. The severe cases all occurred within a limited period. The observations of others, especially in Germany, were criticised; Dr. Dakin's conclusions did not entirely tally with them, especially in respect to results of the examination of the urine. Dr. Boxall discussed the question of the comparatively short period during which the cases of toxic effects were noticed, and called attention to the greatly improved results, as regarded mortality and prevalence of disease, which followed the substitution of corrosive sublimate for carbolic acid and permanganate of potassium. An animated discussion followed. Dr. Graily Hewitt was of opinion that danger might come if corrosive sublimate were henceforward, on the strength of the General Lying-in Hospital statistics, widely used in private practice; whilst Dr. Champneys believed that nothing but good could happen if that antiseptic were more widely employed. During his tenure of office at the hospital, in association with Dr. J. Williams, the total mortality from all causes was 7 in 1,000.

Intermittent Albuminuria in a Child.

Dr. MABEAU (*Revue de Mèdecine*, October, 1886) observed the above-mentioned phenomenon in a healthy child aged ten, whose father, a chemist, made most careful and patient analyses. The child had had croup, whooping-cough, bronchitis, typhoid fever, and measles, all very mildly, and had recovered to good health. It was before the last illness, and during its continuance, that albuminuria appeared. There was no history of scarlatina. The child, although physically and mentally impressionable, gave no evidence of Bright's disease except a slight malaise, and headache occasionally. 447 analyses were made before the patient contracted measles, and the result of these observations was—

1. The existence of an albuminuria of unknown nature, but compatible with health.

2. This albuminuria was intermittent, transitory, and rarely resulted in the loss of much albumen: it was greatest after a meal.

3. The slight albuminuria of early morning is doubtless caused by the meal of the night preceding. Measles neither increased nor diminished the albuminuria.

4. When the child was prevented by fever from eating, its greatest albuminuria was on waking; when enjoying full meals, it had albumen after meals.

5. Excepting the presence of albumen, chemical and microscopical examination revealed no abnormality.

6. Milk diet, absolutely and patiently enforced, lessened a considerable amount of the albumen, but had no effect upon mere traces.

A Successful Hysterectomy.

A most extraordinary injury, done by violence to the genital apparatus of a woman, is described in the *Centralblatt für Gynäkologie* of November 13th.

A woman was brought one morning to the hospital in Hamburg by the police, who had found her lying in the street insensible, her clothing covered with mud and stained with blood. An examination showed a fleshy tumor protruding from the vulva, which proved to be the uterus torn loose from all its attachments except at the anterior vaginal vault; there was also a tear involving the whole recto-vaginal septum, and opening above into the peritoneal cavity. The total extirpation of the uterus was completed in the hospital, and, strange to say, the woman made a perfect recovery. The recto-vaginal tear was then repaired by a plastic operation, which was also successful. The subsequent judicial investigation elicited the fact that the woman had been drinking heavily, till after midnight, with two male companions, who following her on her way home, had cohabited with her, not without her consent; she herself being intoxicated could not tell clearly what had taken place, but it was apparent, from the nature of the injury, that one of these men, in a drunken frenzy, had introduced his whole hand into the rectum, and, rupturing its anterior wall, had endeavored to drag out the uterus entire. The woman had remained lying in the street, in midwinter, until the following morning, and when found showed evidence of having lost a large quanity of blood. Her recovery, under the circumstances, was remarkable, and, taken in connection with the rarity of the injury, if indeed it is not unique, makes the report of the case very interesting.

Cocaine in Obstetrics.

Dr. Barton C. Hirst thus writes in the *Med. News:* In the wards of the Maternity Hospital I have had an opportunity of using cocaine in a sufficiently large number of cases to convince myself of its efficiency in alleviating, if not entirely annulling, the pain of the second stage of labor, especially in its latter part, when the child's head begins to distend the lower portion of the vagina and the perineum. To still the cramp-like pain of the first stage of labor, I believe chloroform will still be found to be best.

From the notes of a number of cases I select the two following:

Case I.—A. B., primipara, aged twenty-two; labor began at 3 a. m., July 27, 1886. As the cervix was being dilated, and the head began to descend, the woman showed signs of great suffering, threw herself about the bed, became livid in the face; at 5 p. m. the first application was made; almost immediately the patient became quiet, and remained so till the birth of the child, of which she said she was hardly conscious; in all, there were four applications made from 5 p. m. to 8 p. m., the hour of the birth.

Case II.—Mrs. D., aged twenty-four, primipara; labor began at 6 p. m. August 9, 1886. Os fully dilated at 1 a. m. August 10th. Child delivered at 5:55 a.

m. As the head began to descend, and from then till the birth of the child, cocaine was applied every half-hour; for that length of time the woman, who was quite intelligent, said that the local anæthesia was almost complete; at the end of that time, however, the effect of the drug seemed to wear off. The preparation used was an ointment of the strength of four per cent., applied with the finger, as evenly as possible, to the mucous lining of the vagina and to the skin of the perineum.

Use of Black Haw in Habitual Abortion and Other Uterine Troubles.

Dr. C. BEVILL in *The Therapeutic Gazette:* In 1878 my attention was called to the haw in a paper published in New Remedies, page 105, April, 1878. I first employed it in the case of a lady who had aborted three times. It was used from the third to the fifth month with her with good effect, and she went to full term, and since has borne two children without any inconvenience.

Besides this case I have employed the haw in sixteen cases of threatening abortion that I have notes of, besides seven others of which I have no record. Six of these patients had aborted from two to four times. In five of them the child was carried to full term. In one abortion occurred, but I do not think the drug was kept up long enough to have the desired effect.

Three of the sixteen had aborted once, and they all went to full term, and did well.

Of the remaining three cases noted of primiparæ, two aborted, and I feel sure that too much time had been lost before they let it be known, and the membranes were broken.

In half of these cases I did not have the fluid extract of the haw, and had to make a decoction of the bark of the root, which I think is best. In giving the fluid extract I gave from thirty to sixty drops, from two to four hours apart, till all pains ceased.

In congestive, as well as obstructive dysmenorrhea, I find it very beneficial, increasing the flow in the obstructive form, that is, obstruction from clots and shreds plugging up the canal.

In after-pains it has acted well with me, causing the patient to rest well.

By its quieting effect on the contracted uterus at the menstrual epoch, black haw allows the flow to go on without causing the patient to suffer as much as she would without it; and, if given in sufficient quantities, I believe it will prevent abortion in almost every case where the placenta is not detached or the membranes broken. It has never, in my hands, affected the stomach enough to produce nausea.

Cases of Triplets Reaching Nineteen Years in One Set and Two Years in Another.

Dr. N. M. MCLEAN thus writes in the *N. Carolina Med. Jour.*: You publish Dr. Crump's paper on "Multiple Fœtation—Triplets," read before the North Carolina Medical Society, at New Bern, in which he reports a case, and in commenting on it says:

"I have been unable to find a single authentic case of triplets in which all of

the children lived, and but one in which any of the children lived more than a few weeks."

Thinking it might, in connection with Dr. Crump's paper, interest the readers of the *Journal*, as well as furnish Dr. C. some statistical matter, I beg leave to report the following cases:

CASE I.—P. McE., colored, in 1867, gave birth to triplets—all females. All three survived, and are now well-developed women. Two of them have given birth to one child each. The parents were 25–30 years old—both colored ("ginger-cake") and of ordinary size and vigor.

CSAE II.—H. McL., colored, on July 17, 1882, gave birth to triplets—two males and one female. All survived and were well-developed—grew fast until March, 1884. (The mother was confined at this time and the children were neglected.) One male died of some acute disease, presumably the effects of exposure. The others still survive—strong, vigorous children.

I might add, in this connection, that this woman, on March 17, 1884, gave birth to twins—male and female. Again, on Decemher 5, 1885, she gave birth to one —a male. As in Case 1, both parents are colored. Age when triplets were born —mother, 36; father, 45 or 50.

Taking into consideration the bad hygienic condition the average negro child of our State exists in—bad and insufficient food and clothing—these cases, which are no exception to the rule, suggest the idea that the vitality of triplets is not so low as Dr. C's paper would lead us to believe. It is true, he quotes "the books," and it may be that these two cases are only a coincidence, although they did happen in the same community.

Simpson mentions a case of quadruplets, in which all survived—one female and three males. The female subsequently gave birth to triplets.

The Management of Placenta Prævia.

Dr. Q. CINCINNATUS SMITH thus writes in *Gaillard's Med. Jour.*: When the physician in charge of a case of placenta prævia decides, for any reason, that delivery should not be longer deferred, regardless of the stage of pregnancy, the writer recommends, provided a few minutes' time for preparation is admissible, that he should pursue the following plan: Give quinine, five to ten grains, every hour, in solution, until one or two drachms be administered. Prepare one or two gallons of hot saturated solution of alum, or other styptic, and a syringe in good working order, with long nozzle curved at its distal end like a urethral sound. It is best that the point of the nozzle should be perforated with a number of small holes.

Place the patient in Sims' position, and bring the os uteri well into view. Introduce the syringe nozzle into the os uteri and slowly inject the hot styptic solution, and, as soon as the hemorrhage is checked, slowly rotate the curved nozzle around the os—injecting all the while—and thus separate the placenta from the uterus. When this has been well done, and hemorrhage has ceased, with the finger at once puncture the placenta at its thinnest available point, through to the membranes, and, if possible, puncture the membranes at the same time. Then quickly inject the hot styptic solution until the hemorrhage ceases again. If the membranes cannot be easily and quickly punctured with the finger, the amniotome should be used.

From the beginning of the operation an assistant should make steady pressure, in a proper manner, over the fundus uteri. At this stage of the operation, if it has not before (as soon as the waters have come away), the uterus will contract more or less vigorously, and if the down-pressing fœtus does not stop all hemorrhage, the hot styptic solution will promptly do so. If necessary, one or more hypodermics of sclerotic acid may be administered. Earnest and persistent effort should now be made to dilate and soften the vagina and os uteri, for which purpose Barnes' rubber dilators, distended with warm water and well lubricated, are very effective.

The labor can then be completed in accordance with general well-established principles, as the attendant—if properly furnished—is completely master of the situation, whatever may be the size, presentation, or position of the fœtus, provided no serious deformity of the pelvis obtains.

The Oakum Pessary.

Dr. W. THORNTON PARKER thus writes in the *New England Med. Mo.:* At a meeting of the New York Obstetrical Society held November 5, 1878, I reported the excellent results which followed the use of the oakum or marine-lint pessary. Several of the members then present expressed their appreciation of this excellent dressing, and kindly endorsed the suggestion. At the June (1886) meeting of the Boston Gynæcological Society, I exhibited specimens of the excellent marine-lint made by Grosvenor and Richards, of Boston, and reported the very gratifying results following my use of this pessary in gynæcology for the past eight years. Marine lint or refined oakum is a surgical dressing of great value, and it was only after witnessing the success attending its use in surgery, that it occurred to me that it might be useful in gynæcology.

There are many cases in ordinary office practice where no better treatment can be adopted than the use of the oakum pessary.

For prolapsed and sensitive ovaries, for the treatment of prolapsed uterus, for many forms of misplacement, and in cases of leucorrhœa, marine-lint is much preferable to absorbent cotton, and keeps sweeter and cleaner longer than any other appliance. The support it affords and the sense of comfort in induces, makes it very acceptable to patients. I apply it always in a ring form, introducing it through the speculum. When a large pessary is indicated, as in prolapsed uterus, it must be introduced without the speculum. The oakum never irritates, and is always free from the odor following the use of any other pessary, or of absorbent cotton. A cotton plug and cocoa butter suppository, make a most undesirable application in the treatment of "uterine cases." The oakum pessary not only absorbs and disinfects the vaginal secretions, but does not lose its place, and continues to afford support until removed. This is not the case with absorbent cotton, which is very objectionable in most instances. In cases of anteversion or retroversion, as well as in cases of prolapse, the oakum pessary will be found superior to the hard or soft rubber pessary. The oakum is not only an excellent support, but possesses healing properties when applied to the diseased mucous membrane of the vagina. I usually saturate the oakum pessary with *Boracine*, manufactured by Messrs. T. Metcalf & Co., Boston, Mass. *Vd. Journal of the American Association*, May 7, 1886. This improves the wholesome action of the pessary, and permits its being retained for a much longer time.

Extirpation of a Ruptured Uterus.

On September 12th, about 9 p. m., Mr. E. COLLINGWOOD ANDREWS (*Brit. Med. Jour.*, Dec. 4,) was summoned to the fifth labor of Mrs. S., aged 31, who was said to have had pains for twenty-four hours. The membrane had ruptured at 6:30 p. m., and the pains then increased in force and frequency, culminating in exceedingly strong and prolonged uterine contractions. The head, which was presenting, advanced but little, and very shortly collapse, intense abdominal pain, and a total cessation of all expulsive efforts ensued. It was at this stage that the extern-attendant sent for Mr. Andrews, who found the patient nearly pulseless, pale and exhausted, but quite conscious; the os was fairly dilated, and the head was on the pelvis brim. Recognising the urgent necessity for immediate delivery, Mr. Andrews introduced the long forceps, and without the least difficulty effected the birth of a still-born female infant, which was followed by a rather copious gush of blood, although the uterus appeared firmly contracted. As the placenta was not expelled, the hand was introduced; it passed through a large rent in the uterine wall into the abdominal cavity. By following up the cord with the finger, it was found that the placenta was in the peritoneal cavity, above the uterus; it was easily removed. The pulse was now imperceptible, and the patient pallid and apparently at the point of death. An injection of ergotin, gr. i, was given, and in half an hour she had slightly improved, though coils of intestine were protruding from the vulva. In the temporary absence of Dr. Galabin, Mr. Andrews consulted with his colleague Mr. A. E. Price, and it was agreed that the patient's only chance lay in the immediate performance of abdominal section. Ether was accordingly administered, and with the assistance of Mr. Price and Mr. F. R. Bisshopp, Mr. Andrews opened the abdomen by a median incision from the umbilicus to half an inch above the pubes; each layer was divided in turn on a director until the peritoneal cavity was reached. Mr. Andrews, by passing his hand downwards and to the left over the uterus, found a large ragged tear at the left border of the organ. The uterus was lifted out through the abdominal wound, and the cervix carefully clamped below the rent. The pedicle also was transfixed, and tied then removed by cutting through the stump. The abdominal cavity was next sponged out as completely as possible, and the pedicle brought forward and fixed with harelip pins to the lower part of the abdominal incision, and the upper part of which was closed with wire sutures. During the whole operation, there was but very little hæmorrhage, and in its earlier stages the patient's condition was all that could be expected. Toward the end, however, she gradually sank, and soon after the operation was completed.

Dyspareunia.

In a paper read before the Washington Gynecological Society, Dr. GEO. BYRD HARRISON cited his experience in the treatment of dyspareunia, in which he administered reproof for the false modesty which prevents the practitioner from asking necessary and proper questions relative to coition, a removal of the evil results of which may promote conjugal falicity, while a disregard we know to have been a fruitful source of much unhappiness and frequent divorce.

Case I. History, four abortions, dysuria acute, intercourse suspended owing to acute suffering attending the act. Examination revealed an indurated periure-

thral tumor, constricting and distorting the urethra, making difficult the introduction of a very small flexible catheter. The ostium vaginæ was so occluded as to barely admit introduction of index finger. The parts were acutely sensitive and painful. Cystitis chronic. By using cocaine, bladder was irrigated without much pain. Owing to patient's vocation (washerwoman) palliative treatment only could be employed. However, the application of cocaine sol. before intercourse gave much relief. When last examined the tumor had somewhat diminished in size.

Case II. Undue length of male organ. Patient complained of acute pain during sexual intercourse, such as to almost inhibit this. Further inquiry revealed an extraordinary length of the intromitting member. The idea was conceived of "taking a reef" in said member. This was accomplished by making a thick cotton or padded ring, and using as a washer, similar in shape to the common inflated ring pessary. The effect was magical, and harmony restored.

Case III. Congenital deformity. History—Age 19; vicarious menstruation, irregular, and *per nasam.*

Patient anesthetized. Examination revealed transverse membranous septum posterior to hymen, completely obstructing the vaginal canal. Breasts normal, also clitoris and labia.

Membranous septum incised, found to be the anterior wall of a sac filled with a glairy fluid, resembling ovarian fluid containing cholesterine. No trace of a uterus to be found. (Presence and size of ovaries not stated positively. Query: Is not Battey's operation indicated?)

Case IV. Malposition of os pubis, the os pubis being depressed so low as to interfere with penetration *a fronte.* The only case in writer's experience did not seek consultation for this deformity. The deformity, however, being recognized, the question of relief suggested itself. In these cases it is advised that all amatory approaches be made *a tergo*, which method has always been successful. When dyspareunia is due to simple hyperesthesia and reflex spasm, the oleate of cocaine, ten per cent., has proved of great benefit; it should be applied about fifteen minutes before intercourse. An unyielding hymen requires a crucial incision, in which cocaine is an excellent local anæsthetic.

Intubation of the Larynx for Diphtheritic Croup in a Child Nine Months Old—Recovery.

Dr. Homer O. Bates, Physician to the Children's Department, Chicago Polyclinic, reports the following case to the *Med. Record:*

On Monday, August 30th, two children were brought to me suffering from diphtheria. The first, Lillian S——, four years old, received a supporting and stimulating treatment, local applications of the persulphate of iron in glycerine being made to the throat. The case terminated favorably, though for several days the child was very hoarse and could not speak audibly. The second child, Gertie S——, nine months old, had patches of false membrane on the fauces and right tonsil. She was put upon the same course of treatment as her older sister, but on the following day I was telephoned for, as the baby was suffering from frequent attacks of dyspnœa. I found the family living in a brick structure, badly ventilated, and filled with unpleasant odors. I ordered carbolic acid to be

used freely in boiling water kept constantly on a stove, and to be sprinkled around the house. The following morning the child was evidently failing rapidly. There was lividity of the face, and the respiration was labored, with recession of the chest-walls at each inspiration. I suggested intubation to the parents, who readily gave their consent. Dr. Frank E. Waxham was called and came immediately, and we assisted him in the introduction of a laryngeal tube of small calibre. There was almost immediate relief; the child had not slept for several hours, but now went to sleep, being awakened at intervals of half to one hour by quite severe attacks of coughing. She was allowed to nurse frequently, only little at a time, as it provoked coughing. In the evening, eight hours after intubation, I found respiration easy, but the temperature was 103⅘° F. in the groin. Antipyrin was given in six-grain doses every six hours by the rectum, and the temperature was reduced to 101⅘° F. in twelve hours. But the little patient was in a critical condition, there being sonorous and sibilant râles and ominous, dry, tubular respiration all over the chest; face livid; pulse irregular, rapid, and feeble; respiration imperfect and sighing; urine scanty.

There being evidence of diphtheritic bronchis, a prescription of carb. ammoniæ, gr. j.; potass. acetat., gr. iv.; tr. nucis vomicæ. ♏ j.; syr. ipecac, ♏ x.; in syr. glycyrrhiza, to be taken every two hours. The relief was very pronounced; moist râles were heard in the evening over whole chest, and the next morning the temperature was 101⅕° F. in groin. From this time on the babe improved, though signs of diphtheritic bronchitis continued for some time. The tube was left *in situ* until the morning of the fourth day, and the medicine was gradually withdrawn during a period of twelve days. A strong solution of carbolic acid was kept boiling in the room, and this no doubt had a beneficial effect, and I would most certainly recommend this procedure to be rigorously carried out in all cases of diphtheritic croup.

The Management of Placenta Prævia.

Malcolm McLean, in a recent article on the management of placenta prævia, in the *Am. Jour. Obstetrics*, thus concludes:

1. In any case, avoid the application of all chemical styptics, which only clog the vagina with inert coagula, and do not prevent hemorrhage. At the very first, the patient should be put in a state of absolute rest, body and mind, and a mild opiate is often desirable at this stage, to quiet irritation.

2. Inasmuch as the dangers from hemorrhage are greater than all else, to both mother and child, at the earliest moment preparations should be made to induce premature labor, and labor being once started, the case should be closely watched to its termination by the accoucheur.

3. In primiparæ and mothers with rigid tissues, the vagina should be well distended, by either the colpeurynter or tampon, as an adjuvant to the cervical dilatation.

4. In the majority of cases, and in all cases, especially where there is reason to believe that rapid delivery may be required, it is more safe to rely on the thorough, continuous, hydraulic pressure of a Barnes' dilator than on pressure on the fœtal parts.

5. Where the implantation is only lateral or partial, and where there is no ob-

ject in hurrying the labor, bipolar version, drawing down a foot and leaving one thigh to occlude and dilate the os, may be practiced, according to the method of Braxton Hicks, except in cases where the head presents well at the os, when,

6. The membranes should be ruptured, the waters evacuated, and the head encouraged to engage in the cervico-vaginal canal.

7. In the majority of cases, podalic version is to be preferred to the application of the forceps within the os.

8. In some cases, in the absence of assistance or the necesary instruments, the complete vaginal tampon, in part or wholly of cotton, may be applied and left *in situ* until (within a reasonable time) it is dislodged by the uterine contractions and the voluntary efforts of the mother. In case of favorable presentation—occiput or breech—the tampon will not materially obstruct the descent of the child, and in some cases the tampon, placenta and child will be expelled rapidly and safely without artificial assistance.

9. The dangers of septic infection by means of the tampon or india-rubber dilators are so slight, if properly used, as not to be considered as seriously impairing their great value.

10. Whenever it is possible, dilatation and delivery ought to be deliberately accomplished, in order to avoid maternal lacerations.

Finally. As cases of placenta prævia offer special dangers from post-partum hemorrhages, septicæmia, etc., the greatest care must be exercised in every detail of operation and nursing to avoid conveying septic material to the system of the mother.

The Use of Mercury in Eclampsia.

Dr. Bedford Brown thus writes in the *Jour. Am. Med.*, Nov. 13: I have lived sufficiently long to have passed through various phases and changes of professional opinion in regard to the pathology and treatment of disease. I have seen theories and systems rise up and rejoice in professional favor, then decline and pass away, to be again revived and adopted. Thus it will be seen that while our profession is steadily marching on in the line of progress, we operate somewhat in a circle. Those of us who began their professional career thirty-five or forty years ago, remember full well the mighty sway which mercury held over the mind of the profession. It entered largely into the therapeusis of almost all diseases. At a subsequent period we witness its sad disgrace, downfall, and almost violent expulsion from the practice. It was hooted, jeered, denounced and universally condemned in fashionable practice. But again we see professional opinion, beginning this time in scientific Germany, taking another tack, and now paying court to this once wretched outcast and recalling it to favor; not, probably, as extravagantly as of yore, but more rationally and conservatively. I have lived to esteem it my best friend, then to regard it as a suspicious subject, but finally one of my most valued agents in battling with disease. In the therapeusis of puerperal eclampsia and nephritis, I esteem mercury a valuable agent as a cathartic and alterative. This opinion is based upon sound experience. As an evacuant and stimulant to the entire system of emunctories and secretory organs, it has no equal. It stimulates and gives impetus to the secretory functions of the kidneys, liver and intestines. It exerts a remarkable alterative action on

the constituents and organisms of the blood, often arresting the disorganizing influence of disease.

The first case of puerperal eclampsia which came under my care, in the year 1851, was treated by means of depletion, mercury and ergot. The case was an exceedingly violent one, but recovered. Calomel was given in scruple doses every three hours until it acted as a cathartic most copiously. It also acted as a diuretic. After the birth of the child the patient remained comatose for twenty-four hours. Nowithstanding the patient had been effectually salivated, her restoration in every particular was speedy and uninterrupted.

At a subsequent period, when it became fashionable for high medical authorities to condemn the use of mercury in acute nephritis in any form, I abandoned its use for a time in puerperal eclampsia, but with a decline in my former success. I have again returned to its use in puerperal eclampsia, with equally good effects. To obtain the favorable action of the remedy, it should be adminstered in scruple doses every three hours until its cathartic and diuretic action is procured. I would again call the attention of the profession to the diuretic action of mercury. In acute nephritis, whether from cold, scarlatinous poison or puerperal causes, I have repeatedly witnessed the action of mercury on the functions of the kidneys, arousing them from a state of inactivity when other remedies have failed.

The Effect of Retained Membranes on the Puerperal State.

Dr. FISCHER, of Professor Slavianski's clinic, writing in a recent number of the *Vrach*, gives the result of a number of observations made for the purpose of testing the commonly received view that portions of membrane retained in the uterus after the expulsion of the placenta are liable to produce serious consequences—as hæmorrhage and especially the so-called auto-infection or septicæmia,—and that therefore it is of the utmost importance that they should be removed by the hand or by intra-uterine injections. This view is supported by the authority of Winkel, Dohrn, Ahlfeld, and others; while Olshausen, Credé, Weiss, and Landau consider that there is little harm in the retention of even considerable portions of the chorion. Dr. FISCHER's observations extended over 682 labors, in each of which he carefully examined the after-birth. In forty-two of these cases (*i. e.*, 6.2 per cent.) a portion of the chorion was retained. Credé's method of manipulating the fundus uteri gave the best results regarding the percentage of retention. In primiparæ retention was nearly twice as frequent as in multiparæ, the percentage being 9.1 and 4.9 respectively. Some effect appeared to be exerted by the time at which the rupture of the amnion took place, which, when either too early or too late, seemed to predispose to retention. Premature deliveries also were rather more frequently followed by retention than those at term. As a rule, the retained chorion came away in the course of from four to six days, generally in several small portions, sometimes, however, in fragments of considerable size, and in one case, where three-quarters of the chorion had been retained, it was passed entire on the fifth day without having caused either hæmorrhage or sepsis. Amongst the forty-two cases hæmorrhage occurred only four times, and was always easily arrested either by hot irrigation or by ergot and manipulation of the uterus. When, however, we learn that out of the forty-two cases manual extraction of the fœtus was required seven times, and

that a considerable loss of blood occurred during the third stage eleven times, four cases of slight post-partum hæmorrhage does not appear at all excessive. With regard to pyrexia, in twenty cases, or 47.6 per cent., there was none; in twelve, or 28.6 per cent., the thermometer, which was always used thrice a day, once registered a rise above normal; and in ten, or 24.8 per cent., there was more or less pyrexia. In order to compare these with cases in general, Dr. FISCHER gives the results of similar observations made on all the cases he has attended for the last two years. These show that there was no pyrexia in 58 per cent., that the temperature was only once above normal in 17.6 per cent., and that there was pyrexia in 24.4 per cent.; so that the ratio of appreciable pyrexia was about the same in the cases in which retention occurred as in ordinary cases. A slight amount of endometritis occurred in three out of the forty-two cases. Dr. FISCHER concludes from his observations that there is no ground for supposing that retention of fragments of membrane gives rise to "auto-infection," and considers that the commonly received view is fraught with danger, inasmuch as it tempts the accoucheur, when sepsis occurs, to throw the blame, not on himself, as he ought to do, but on some fancied auto-infective process, and thus probably prevents his being as particular as he should be in employing antiseptic methods in the management of the labors he has to attend.

Diagnosis of Infantile Diseases.

In a recent number of *L' Union Médicale du Canada*, Dr. BRADLEY gives the following summary of points on the diagnosis of disease in infants:

1. Congestion of the cheeks, excepting in cases of cachexia and chronic disease, indicates an inflammation or a febrile condition.

2. Congestion of the face, ears, and forehead of short duration, strabismus, with febrile reaction, oscillation of the iris, irregularity of the pupil, with falling of the upper lids, indicates a cerebral affection.

3. A marked degree of emaciation, which progresses gradually, indicates some subacute or chronic affection of a grave character.

4. Bulbar hypertrophy of the fingers and curving of the nails are signs of interference in the normal functions of the circulatory apparatus.

5. Hypertrophy of the spongy portions of the bones indicates rachitis.

6. The presence between the eyelids of a thick and purulent secretion from the Meibomian glands may indicate great prostration of the general powers.

7. Passive congestion of the conjunctival vessels indicates approaching death.

8. Long-continued lividity, as well as lividity produced by emotion and excitement, the respiration continuing normal, are indicative of a fault in the formation of the heart or the great vessels.

9. A temporary lividity indicates the existence of a grave acute disease, especially of the respiratory organs.

10. The absence of tears in children four months old or more suggests a form of disease which will usually be fatal.

11. Piercing and acute cries indicate a severe cerebro-spinal trouble.

12. Irregular muscular movements, which are partly under control of the will when the patient is awake, indicate the existence of chorea.

13. Contraction of the eye-brows, together with a turning of the head and eyes to avoid the light, is a sign of cephalalgia.

14. When the child holds his hand upon his head, or strives to rest the head upon the bosom of his mother or nurse, he may be suffering from ear disease.

15. When the fingers are carried to the mouth, and there is, besides, great agitation present, there is probably some abnormal condition of the larynx.

16. When the child turns his head constantly from one side to the other, there is a suggestion of some obstruction in the larynx.

17. A hoarse and indistinct voice is suggestive of laryngitis.

18. A feeble and plaintive voice indicates trouble in the abdominal organs.

19. A slow and intermittent respiration, accompanied with sighs, suggests the presence of cerebral disease.

20. If the respiration be intermittent, but accelerated, there is capillary bronchitis.

21. If it be superficial and accelerated, there is some inflammatory trouble of the larynx and trachea.

22. A strong and sonorous cough suggests spasmodic croup.

23. A hoarse and rough cough is an indication of true croup.

24. When the cough is clear and distinct, bronchitis is suggested.

25. When the cough is suppressed and painful, it points towards pneumonia and pleurisy.

26. A convulsive cough indicates whooping-cough.

27. A dry and painless cough is sometimes noticed in the course of typhoid and intermittent fever, in difficult dentition, or where worms are present.

The Extra-Uterine Causes of Uterine Symptoms.

The *N. Y. Med. Jour.* says: For some time past there have been indications that the endometrium was to be dethroned from the high place it has held for many years in the minds of gynæcologists, and to be succeeded by the extra-uterine pelvic structures, especially the peritoneum and the cellular tissue. We regard it as the crowning glory of Dr. EMMET'S labors that it is largely to his influence, working most of the time against heavy odds, that the change of opinion now unquestionably entered upon is to be attributed. Dr. Emmet's ideas of pelvic pathology have of late become quite thoroughly known, but they were so well expressed by him in a paper entitled "Certain Mooted Points in Gynecology," read at the recent meeting of the British Medical Association, that we think it will prove profitable to our readers if we lay before them some of the leading points in the paper as it appears in the *British Medical Journal.*

Founding his argument to a great extent on therapeutical results, Dr. Emmet begins by remarking that pessaries give relief, not by maintaining the uterus in its normal posture, but by supporting the over-stretched pelvic fascia, and thereby diminishing the congestion due to relaxation of the vessels—in short, their office is to elevate the entire uterus to its proper plane in the pelvis, and not merely to correct a faulty or exaggerated inclination. If the organ is lifted above its normal plane, he says, the patient has the same vesical symptom as if it were prolapsed, *i. e.*, a frequent desire to urinate, due to traction upon the neck of the bladder at its point of attachment to the tubes. The term obstructive dysmenorrhœa he regards as a misnomer, since flexures of the uterine body do not close the canal sufficiently to prevent the escape of the menstrual blood.

The association of the two is accidental, although both may be due to the same cause. Hence operations for enlarging the canal can produce only temporary benefit, while they may result in lighting up an old peritonitis, evidences of which are seldom absent in these cases. Intra-uterine medication and the frequent use of the curette he characterizes as the outgrowth of the mistaken idea that menorrhagia is due to causes within the uterus instead of without that organ. Ergot is given indiscriminately for the purpose of checking the excessive flow, especially when the latter is supposed to be due to the presence of a small fibroma; but, if the os uteri is undilated, and the tumor is so situated that it can not be expelled by the uterine contractions, the result of the latter is simply to increase the general pelvic congestion by diverting the blood from the womb. Discharges from the uterine canal, when not due to malignant disease or to specific infection, are caused by various obstructions from old pelvic inflammation. Dr. Emmet attributes the improved results that he has obtained in his private hospital during the past seven years to the fact that he has abandoned intra-uterine applications in favor of those made to the vagina, and to his having limited the use of pessaries to a few carefully selected cases, endeavoring to correct prolapse of the uterus by the systematic employment of glycerin tampons, but not interfering with versions or flexions until the evidences of pelvic inflammation have been removed.

From another source, and from an observer viewing the subject from a different standpoint, comes a contribution that it is interesting to compare with Dr. Emmet's. We refer to a paper on "The Relation of the Endometrium to Affections of the Annexa," by Dr. Czempin, published in the "Centralblatt für Gynäkologie." That gentleman endeavors to show that while in the majority of instances an inflammation of the uterine mucous membrane extends outward to the oviducts, in some cases it is secondary to disease of the appendages. As a proof of this statement, he calls attention to the change in the character and quantity of the secretion of the mucosa and the sudden hæmorrhages from it which attend active disease of the appendages or the adjacent serous or cellular tissue. Even where a salpingitis is secondary to an endometritis, if the latter is cured, he says, a fresh inflammation in the tube will sometimes cause a return of the intra-uterine trouble. He calls attention also to the persistent metrostaxis which is not infrequently noted after the removal of both tubes and ovaries. This phenomenon, he thinks, is referable to the congestion of the endometrium produced by the constant irritation from cicatrices or adhesions in the pelvic peritoneum, especially in the broad ligaments, resulting from the operation. In several such instances fungosities have been found, but in others the employment of the curette has shown the endometrium to be either simply hypertrophied or quite normal.

Vaginismus.

Before the British Gynecological Society (Nov. 10), Dr. BANTOCK read a paper on this subject. Dr. Marion Sims a quarter of a century ago had first brought the matter before the notice of the Obstetrical Society. He defined the condition as "an involuntary spasmodic closure of the mouth of the vagina, attended with such excessive supersensitiveness as to form a complete barrier to coitus," and he compared it to the painful spasmodic closure of the eyelids when the eye

is intolerant to light. He devised a method of treatment which in its principle has since become general, and is easy, safe, and certain. That principle was to overcome muscular spasm. Dr. Bantock then related several cases in which the exciting cause appeared to be, in the first, extensive excoriation of the circle of the os, with an extension forwards on the anterior aspect of the cervix as large as a shilling, and a copious glairy discharge issuing from the canal; in the second, intense congestion of the cervix and vagina, with a copious glairy discharge issuing from the os. These two cases resembled one another very much, and it was evident that in both the exciting cause was uterine congestion. In the third case the patient was very much out of health, and the uterus was retroflexed. In the fourth, the patient suffered greatly from dysmenorrhœa. The cervical canal was much constricted. Marion Sims had performed his usual operation of division, but with only temporary benefit. Finally the uterine appendages were removed. In this case the vaginismus appeared to keep pace with the degree of uterine congestion. In the fifth case, there was considerable congestion of the vagina and cervix, with some leucorrhœa. In the sixth case, the uterus was retroverted and the rectum loaded. Dr. Bantock adds, that while a minor degree of vaginismus was very common, and passed away under the manipulations necessary for the treatment of the associated condition of the uterus, the more severe form of the disease, causing special symptoms and requiring particular treatment, was not common. This condition appears to be essentially of reflex origin. In none of the cases was there any local cause, such as inflamed follicles or sensitive papillæ. With regard to treatment, no cutting operation was necessary.

Dr. Barnes said that vaginismus must be regarded, like hysteria or neurosis, as simply a convenient term for a symptom which might be due to one or more of several causes. Dr. Bantock had associated vaginismus mainly with one condition—uterine inflammation—but he believed some cases were attributable to morbid conditions of the vulva. Uterine inflammations and displacements were common, whereas true vaginismus was rare. Moreover, he had seen vaginismus without any tangible uterine complication. He had often removed an irritable or inflamed hymen with success. In some cases forcible distension under chloroform had answered. Some he had cured by making a subcutaneous and submucous incision on either side of the vulva through the muscular fibres.

Dr. Culver James thought that some cases of so-called vaginismus were really due to obstruction caused by the presence of the hymen or of growths.

Dr. Routh did not believe that marked and severe cases of vaginismus could be cured by simple dilatation, and he did not accept the doctrine that all such cases were due to a reflex action in consequence of disease of the uterus. His treatment was to cut away all remains of the hymen, and then to make two deep incisions on each side of the vagina; but he made the patient wear, from the very first day of the operation, a full-sized Sims' glass plug from two to six hours daily, so that in fact the cut edges, as it were, healed upon the glass.

Dr. Blake observed that vaginismus as a primary idiopathic disease might exist, but he had never encountered a case. The two most typical examples he had recently seen were associated with retroflexion and endometritis villosa. On the removal of those conditions, the vaginal spasm promptly and completely disappeared.

Dr. Bedford Fenwick considered that vaginismus was a reflex condition. He related a case in which a mass of inflamed hæmorrhoids was the exciting cause. These were removed, and the muscular spasm completely disappeared.

Dr. Rutherford had met with a case in which thread-worms were apparently the cause of the vaginismus.

Dr. Edis said it was curious to notice that the increase of experience of female disorders closely corresponded with a diminished frequency of cases of vaginismus. If careful search, however, were made, it would generally be found that some fissure, vascularity of urethra or vulvar orifice, or some other well-marked cause existed, the removal of which relieved the symptom.

Atresia of Vagina.

Dr. E. K. WILLIAMS thus writes in the *Mississippi Valley Med. Mo.:* In reporting this case, I do so not with the expectation of adding anything new to the pathology of atresia, or anything to the modus operandi of operation for the relief of the trouble, but because of the very rare occurrence of such cases, and to show how perfect may be the cure, by following the directions laid down by others.

I was called hurriedly about June 1, 1885, to see Mary G. On my arrival found her suffering with convulsions, caused, as diagnosed subsequently, from absorption of menstrual products that had been so long imprisoned within the uterus. Before proceeding with the history of case, I will state the real condition of the patient, as ascertained by subsequent examination. We have here a patient aged twenty-three years, married three years, who never menstruated, well developed in every particular, save in the atresia of vagina, enjoying fair health except the periodical attacks that she had been having off and on for more than five years, which were beginning to play havoc with her. After making a hurried examination, I must confess that I was at a loss for diagnosis, or rather a cause for the symptoms present, not knowing anything of the history of the case previous to this time. After administering a dose of chloral hydrate and bromide of potassium for the relief of the symptoms present, I returned home utterly ignorant as to the real condition of the patient. But on my return visit the following morning, by thorough examination, a complete diagnosis was made out. As stated before, upon inquiry, found that she had never menstruated; and upon digital examination I found that I could not introduce my finger further than half an inch, using any amount of force. After using probe, I found it impossible to find the most minute opening of any kind. So after diagnosing the real trouble, and admitting the impossibility of relief from any known therapeutical measure, what shall we resort to for the relief of our patient? Certainly, an operation.

But before surgical measures are instituted for the relief of atresia, it becomes necessary to differentiate it from absence of vagina. Absence of vagina very rarely exists without absence of uterus, and rudimentary development of some of the external organs of generation. Should an obliterated vagina exist, it can readily be made out by placing one finger in the rectum and sound in the bladder; you will recognize a hard fibrous cord. If deformity of the external genitals exist, the uterus not discoverable and no unusual disturbance at men-

strual periods, it may be concluded that you have to contend with absence of vagina, not with atresia.

In this case the labium major and minor, in fact all of the external genitalia, seem to be perfectly developed, and at the end of every month, or at what should be menstrual periods, she suffers intensely, as if suffering from painful dysmenorrhœa, followed usually by convulsions. So we have clearly made out a case of atresia. One would naturally inquire, is the atresia accidental or congenital? As to this, I am not prepared to say, but am inclined to the opinion that it is accidental. I have this history from the mother. When she was about nine years old she fell violently from a swing, lacerating and wounding the vulva, which produced alarming hemorrhage; but in the course of time she recovered from this accident, and nothing unusual occurred until she became old enough to menstruate. Then commenced the long train of symptoms that lasted until she was operated on for relief.

As to the prognosis in this case, without surgical interference I am of the opinion that she would unquestionably have died. She had been steadily losing ground for the past year. No doubt but what she menstruated regularly, so far as the flow from the uterus was concerned; but there being no outlet for the menstrual fluid, and the blood having to take up and appropriate this effete matter, grave results would necessarily follow, and in the end death. So after realizing the condition of the patient, and obtaining her consent, which I can assure you was no easy task—but after long importunity on the part of myself, and threatened separation on the part of her husband, as his marriage relations were necessarily not very happy, I operated.

All preliminaries necessary having been made, and the patient thoroughly chloroformed, as it was found impossible to produce complete anæsthesia by the use of ether, assisted by Drs. D. H. and J. H. Anner, to whom a large portion of the success of the operation was due, the patient having been placed well upon her back, rubber tube in the rectum, catheter in the bladder, the operation commenced. The only instruments used were two or three small long-bladed knives and several forceps. Following Dr. Emmet's directions, gradually dissecting, tearing with the fingers, gradually the way was made up to the uterus. The amount of tissue cut through must have been two or two and a half inches. The amount of blood lost was exceedingly small, much less than expected. A small, flabby, undeveloped uterus was found, not measuring more than an inch in length.

After finding that a new vagina was completed, and large enough, it was thoroughly washed with carbolized water, until all hemorrhage had ceased; then a glass dilator was introduced and held in position by a T-bandage, and kept there until the following morning. On my return the following morning, found the temperature 103½°, patient doing well with the exception of this rather high temperature. The dilator was removed, vagina thoroughly syringed, and dilator replaced. This treatment was kept up for fourteen successive days; in the meantime, considerable suppuration had taken place, and the wall of vagina had healed nicely; but I directed the dilator to be kept in situ and the vagina syringed twice per day. Have kept her wearing the dilator regularly ever since, with the exception of one or two days out of a week.

Now more than a year has elapsed since the operation was performed, and I am glad to say that she has entirely recovered—has a large and roomy vagina, large enough for any purpose, even parturition. Her menstrual periods have not been regularly restored, but she menstruates about every five or six weeks. All of the bad symptoms have disappeared. Her general health is very good. The husband tells me that all of the duties of married life are performed with perfect satisfaction.

Ought Craniotomy to be Abolished?

Before the British Gynecological Society, Dr. ALFRED MEADOWS read a paper on this subject, in which he brought forward certain statistics, intended to show that by a comparison of the relative mortality of craniotomy and the Sänger method of performing the Cæsarean section, this question was rapidly approaching an affirmative solution. Considering the part played by British gynæcologists in the progress of abdominal surgery, he thought that they ought to be foremost in this great reform, and not, as seemed likely, rather behind the rest of the world. He contended that by the Sänger or any similar operation, far more human life would be saved than by operations for the removal of the uterine appendages for fibro-myoma, or even perhaps of ovariotomy. The rule which he wished to lay down was that in no case and under no conditions should a human life ever be sacrificed by the hand of the obstetric practitioner. Some statistics were then detailed which the author had received from Dr. Harris, of Philadelphia, which showed that of 31 operations performed after the Sänger method, 23 had occurred in Germany, 4 in Austria, 2 in France, and 2 in Italy. The result to the mothers was the saving of 24, or a maternal mortality of a little over 21 per cent., while 29 of the 31 children were saved, giving a fœtal mortality of about 7 per cent. Even this mortality was being greatly reduced; for of 20 operations performed from July, 1885, to July, 1886, no fewer than 18 mothers were saved, thus reducing the maternal mortality from 21 to 10 per cent.; and of the 20 children 19 were saved, or a fœtal mortality of only 5 per cent. Comparing this mortality with that which obtains in the case of craniotomy, he thought that his prediction of the ultimate and speedy abolition of craniotomy was being rapidly verified. Nor was this great success due to the special aptitude of any one operator, for the 20 operations last referred to were performed by no fewer than 13 different operators, in various countries.

The President said he was certain that craniotomy was practiced to an unjustifiable extent. A commission of inquiry as to the preformance of certain operations, with which prominent members of the Gynæcological Society had their names associated, was threatened, but he thought that many other things were much more deserving of inquiry than those. Above all others stood this very question of child-murder, for he certainly could not qualify the performance of this operation as it was done by anything short of that strong term. That the operation of craniotomy should ever be completely banished from obstetric practice, he thought very unlikely, because it must be clear that in certain first cases a man must be led every now and then inevitably into its performance. But the knowledge that a pelvis was so distorted as to make it necessary to perform this operation in the first instance was sufficient guarantee against its being repeated

in a second or third labor, and still more in succeeding pregnancies, when premature labor offered such an easy solution of the question. In cases where it was impossible, without great risk, to secure the birth of a child without its destruction by breaking up, if that child were alive, then its delivery by abdominal section was clearly the proper thing to do; for not only did it save the child, as illustrated in the statistics noted by Dr. Meadows, but it prevented the mother from again running such terrible risks as this horrible operation involved.

Dr. Barnes said the problem would be nearer solution could we bring the Cæsarean section, in some form, to such perfection that the mortality attending it should be reduced to that attending craniotomy. Dr. Meadows put the mortality of Cæsarean section according to Dr. Sänger's method at 20 per cent. Admitting this for the purpose of argument, and admitting, further, that the operation might be so improved as to attain an even smaller mortality, he would still most emphatically protest against the statement that the necessary mortality attending craniotomy approached 20 per cent., or even 5 per cent. Excluding the cases of extreme pelvic contraction which forbade the hope of extracting the child after craniotomy, and which all acknowledged should be treated by the Cæsarean section, craniotomy, done under fair conditions, such as postulated for the Cæsarean section—that is, done at a chosen time, with due skill—did not involve any material mortality. This being so, we were driven to fall back upon the long-recognized claim of the mother to be considered first. Now, assuming that 20 mothers out of 100, or even 5, were sacrificed to the Cæsarean section, in order to save, say, 90 children, might not those doomed mothers rightly plead their prior right to be saved? The circumstances hardly permitted the mother to form a just judgment. We have to act for her, and were we not bound to do our utmost to save her? Undoubtedly very much had been gained, and much more would be gained, in the direction of lessening the frequency of the resort to craniotomy. Still, he feared that the abolition of craniotomy was as yet an aspiration, and not an accomplished fact.

Dr. Routh said there could be no doubt that, with properly constructed forceps, many cases formerly treated by craniotomy could be delivered. When so eminent an obstetrician as Dr. Robert Lee had 137 perforations to 55 forceps cases, it was manifest that times had greatly changed now for the better. Clearly, in the case of a dead child, abdominal section could scarcely, if ever—and then only in a deformity quite out of the common—be practised. Again; was abdominal section always practicable? In a hospital the case was very different from what occurred in the slums of a town. When a man was suddenly called to an urgent case at night in a slum, surely craniotomy offered the best chance to the mother; *a fortiori* was this true, if the child were putrid as well as dead. In such cases, the abdominal section would almost be certainly fatal, even with perfect appliances.

Dr. Edis agreed that we were hardly yet in a position to give up craniotomy entirely. Cases where the prospects of a living child being born were small would be sure to occur from time to time, and then craniotomy would have to be resorted to. The induction of premature labor was a far more scientific method than the repeated performance of craniotomy in the same patient.

Mr. Phillips Hills hoped that no leading obstetrician would lay down any such

law in black and white as that proposed by Dr. Meadows. The public are often only too ready to seize an opportunity of bringing legal actions against medical men: and it might happen that a practitioner not in a position to do abdominal section in a reasonably scientific manner, but able to do craniotomy, would perform the latter operation, hoping to save one life at the sacrifice of another, rather than pretty certainly lose both through unavoidable delay, and then, if the mother should by chance die, that written law would be produced against him in a court of law.

Pregnancy Complicated by Purpura Hæmorrhagica.

Dr. JOHN PHILIPP thus writes in the *Brit. Med. Jour*: This disease was first accurately described by Werlhof,* more than a century ago, and is still called "maladie tachetée de Werlhof" by the French physicians. Rogert and Adam, in 1789, were evidently acquainted with the disorder, and the former describes a case at some length under his care;† while Gräfe had previously written a thesis on the subject.‡ Cockcroft gives an historical account of it up till 1827, and quotes Duncan's opinion as to its probable pathology.‖

Very little real advance in our knowledge has been made since Willan' wrote his work on *Cutaneous Diseases*, in 1808, until quite recently; while the connection between this disorder, and the changes going on during the pregnant condition, seem to have received but scanty notice. Scattered, however, through the literature on this subject, cases are found which show that, should it occur during pregnancy, the character of the prognosis will be materially altered.

The complication of pregnancy by purpura hæmorrhagica is extremely rare, but, unfortunately, of very serious moment. Puech§ mentions two cases, the second occurring seventeen years after the first, in both of whom death took place; another has recently been under my own care, and, fortunately, has made a good recovery.

CASE I.—The patient, aged 21, was six months' pregnant. The onset of the symptoms began with a sudden attack of colic, followed by general petechial rash and epistaxis. On the fifth day, labor-pains began, and terminated with the birth of a male child; there was no trace of purpura on its body. No external hæmorrhage followed, but the uterus became much distended with blood-clot. The patient, becoming delirious, died on the eighth day. No *post mortem* examination was allowed.

Case II.—The patient, aged 30, was eight months gone in her fifth pregnancy. The rash appeared suddenly during the day, and labor set in the same night. The expulsion of the fœtus was followed by severe *post partum* hæmorrhage, which proved fatal.

Case III.—The patient, aged 32, with six children, was within a fortnight of her seventh confinement. All her labors had been quite natural, and there was no history of bleeding in her family. She lived very badly for six months pre-

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* P. G. Werlhofii *Opera Omnia*, coll. et aux. J. E. Wichmann (1775).

† *De Morbo Maculoso Hæmorrhagico* (Thesis, 1789).

‡ *De Petechiis sine Febre* (Thesis).

‖ *Purpura* (Thesis, 1827).

§ Du Purpura Hæmorrhagica (*Annales de Gyn.*, Tome xvi, 181, p. 2873).

viously. The first thing noticed by her was that the motions were black. Three days afterwards, she found, on undressing herself, that her legs were covered with irregular bluish-black blotches; no pain or irritation accompanied their appearance. The next morning she awoke with blood pouring out of her nose and mouth, and found that the skin-eruption had increased. Bleeding from the mouth and nose continued during the sixth day of the illness, and in the evening she passed urine of a dull red color; slight pains came on, as of commencing labor. Her complexion was sallow; her hair black; the tongue and lips were dry, brown, and cracked. The gums were of a purplish color, bleeding on the slightest touch; and the breath was very offensive. The pupils were widely dilated, but she made no complaint of dimness of vision. By the ophthalmoscope, both optic discs were seen to be normal. Temperature, 98.4° Fahr.; pulse, 124 per minute, small and thready, but quite regular. On both legs and arms, there was a generally distributed hæmorrhagic rash, of a purplish color, neither tender to the touch, elevated above the surface, nor disappearing on pressure. Amidst this, at intervals, were numerous irregular blotches, with fairly defined margins, but of no recognized form. On the adductor surface of the right thigh, just above the knee-joint, and on the flexor surface of the right wrist, there were two hæmorrhages, deeply seated, tender on pressure, and of the size of an almond. The urine was thick, of dark tea-color, containing one-third of albumen; no sugar. The fœtal heart-sounds were distinctly audible through the abdominal walls, beating 144 per minute. *Per vaginam*, the os uteri was dilated to the size of a shilling, and with each pain the membranes became tense. Strong beef-tea was administered freely, and twelve drops of the tincture of the perchloride of iron every four hours. Tincture of krameria was applied to the gums.

The next day, February 17th, 1885, she seemed somewhat improved. A few more spots had come out on the legs, but they were preceded by no hyperæmic redness of the skin; the gums were still bleeding. She had uterine pains every half hour; the os uteri was more dilated.

February 18th. Pains were still going on; the os was dilated to the size of a half-crown; the breech was presenting. Pulse 120; temperature normal. At the apex the systolic sound was "murmurish" in character; there was a soft systolic anæmic murmur at the second left costal cartilage. The gums were improving; the fæces were still black.

February 19th. The patient was delivered of a female child, without any rash; the placenta presented three patches of hæmorrhage, the clots being apparently two or three days old.

The next day the heart-sounds became distinctly altered. The first sound at the apex was replaced by a distinct murmur, blowing in character, rather low pitched, heard most distinctly in the fourth interspace to the left of the sternum. It was not conducted into the axilla, nor heard at the angle of the scapula. There was still the systolic murmur at the second left costal cartilage; and the second pulmonary sound was found accentuated. The patient made a quick recovery; the apical *bruit* entirely disappeared in ten days' time, and should therefore be classed in the first group mentioned by Dr. Angel Money*. The rash slowly disappeared, in the usual way.

* Frequency of Cardiac Murmurs in the Puerperal State (*Med. Chir. Trans.*, 1882, p. 87).

Morbus maculosus Werlhofii is an acquired and transitory hæmorrhagic condition, occurring sporadically and of brief duration, obscure in etiology and spontaneous in development (Wetherill).* According to Russell,† the blood is the site of the disorder. Immermann‡ thinks that it arises either from disease of the blood, or the vascular walls, or of both combined. No actual disease of the blood-vessels has at present been discovered, and, so far as we know, the blood may be normal, or its coagulability may be somewhat impaired from scarcity of fibrin.

Henoch's theory that it is a form of vaso-motor paralysis seems more tenable; and it is quite possible that a disturbed condition of the vaso-motor nerves might so alter local blood-pressure as to cause rupture of the capillaries, or, at least, allow of diapedesis through the broadened interstices of the capillary wall. Dr. Stephen Mackenzie,‖ who appears to be the most modern writer on this disease, slightly modifies Du Castel's classification, and divides cases of purpura into four varieties; the vascular, toxic, mechanical and neurotic. Weir Mitchell§ and Milner Fothergill¶ gives very strong reasons for the neurotic origin of some forms of this disease; while Leloir** recognizes three groups:

1. Purpura from modification of the vessel.
2. Purpura from modification of the blood; and
3. Purpura nervosa.

In pregnancy, we have present a combination of the characteristics of the vascular and neurotic groups. In the later months there is a remarkable diminution in the number of the red blood-corpuscles, and a considerable increase in fibrin; moreover, the nervous condition is one of very high tension, and with the almost invariable left ventricular hypertrophy, there is increased arterial tension. In addition, the general depreciation of health occurring during the process must not be overlooked. The only reason which suggests itself to me for the extreme rarity of purpura hæuorrhagica during pregnancy is the highly fibrogenous state of the blood found in this latter condition. When it does occur, hæmorrhages would almost necessarily take place at the placental site, as in my own case, and labor thereby be induced, as in the three cases detailed.

As is usual, the symptoms came on suddenly; no pain seemed to accompany the appearance of the rash, and at no time was there a rise in temperature, although the pulse was very high.

Treatment seems to be unsatisfactory; indeed, Wunderlich is skeptical of the value of any method. Turpentine is recommended by many, but Dr. Duncan Bulkley†† strongly advocates ergot. He administers it either as the liquid extract, by the mouth, or injects it subcutaneously, as ergotin. He considers the disease due to paralysis of the vessels, which ergot overcomes, but whether it

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* *Philadelphia Med. Times*, 1884–5, 427.

† *British Medical Journal*, 1883, vol. ii, p. 415.

‡ Ziemssen's *Cyclop. of the Pract. of Med.*, vol. xvii, p. 243.

‖ *British Medical Journal*, 1883, vol. ii, p. 409.

§ *Amer. Journal of Med. Sc.*, vol. lviii, p. 120.

¶ The Systemic Relations of the Menstrual Week (*Amer. Journ. Obst.*, 1881, p. 38).

** *Annales de Dermatologie et de Syphiligraphie*, 1884.

†† *Practitioner*, 1876, vol. xvii, p. 321.

does so by causing a contraction of the vasa nervorum, he is unable to decide. Cianciosi,* King,† Minich,‡ and others, have recorded cases where from a grain to a grain and a half of ergotin was injected every two or three hours with a successful result, and where other remedies, such as gallic acid and the like, had been tried in vain.

The objection to the liquid extract, when administered by the mouth, or indeed when any drug is given in this way, is that the stomach may be already more or less distended with blood-clot, and any desired therapeutic effect would be necessarily neutralized. An objection to subcutaneous injection may appear at first sight somewhat fanciful, but it is nevertheless real. Puech relates a case where the orifices made by the needle oozed to such an extent that the actual cautery was requisite to stay the flow. Dr. Shand‖ describes a case where a child was reduced to a moribund condition from this disease; after exhausting all the usual remedies, he applied the interrupted current all over the body by means of sponges, and repeated the process every two hours. In twelve hours' time the hemorrhage had practically ceased. Waugh§ states that he has had great success with the local application of a 4 per cent. solution of hydrochlorate of cocaine to the bleeding gums. I administered no ergot in my own case, because the hemorrhage seemed to cease with good nourishment; had I done so, the cessation might have been attributed to that drug.

The conclusions to be drawn appear to be as follows:

1. The purpura hemorrhagica occurring during pregnancy partakes partly of the vascular and partly of the neurotic type.

2. The disease has a decided action on the gravid uterus, being almost certainly productive of abortion, and hence the question of induction of labor in these cases need hardly be entertained.

3. The prognosis is extremely grave in this condition, death taking place in consequence of intra-uterine or *post partum* hemorrhage.

4. After the seventh month, the risk to the child's life is not necessarily greater than in artificial induction, nor does the mother's disorder descend to her offspring.

5. Treatment is unsatisfactory, but at the same time ergot and the faradic current appear to be of some value as curative agents.

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* *Gaz. Médicale de Paris*, No. 19, 1875.

† *Amer. Journ. of Med. Sc.*, 1876, vol. i, p. 593.

‡ *Phil. Med. Times*, 1874–5, vol. v, p. 502.

‖ *Lancet*, 1879, vol. ii, p. 79.

§ *Phil. Med. Times*, 1884-5, p. 380.

VII. SURGERY.

Permanganate of Potassium in Burns and Frost-Bites.

Zubon (Medizinsko Obozrenië ; London *Med. Record*) reports forty-four cases of burns and thirteen of frost-bite which were treated with local applications of a solution of the permanganate containing one or two grains to the ounce of water. He finds the solution most useful in the treatment of frost-bite; it relieves pain, allays inflammation, and prevents suppuration in blisters. In burns of the second degree a half-grain solution is preferable.

Gonorrhœa.

Dr. Alexander V. Khrul, of Irkutsk, has for two years successfully treated gonorrhœa with an ointment of iodoform, one part, and vaseline, ten parts, somewhat liquefied by heating, and then aspirated by suction into a fine elastic catheter, the latter being anointed externally with the same ointment, and introduced to the depth desired. The ointment is blown out by the operator's or patient's mouth. The painful phenomena of the acute stage disappear in 24 hours. This method is especially indicated in persons with irritable urethra and kidneys.

Iodoform in Neuralgia.

A mixture of one part of iodoform to ten or fifteen of collodion, if spread repeatedly upon a neuralgic surface until it attains a thickness of one or two millimeters, is said by a writer in the *Neurological Review*, to be quite effective in the treatment of certain neuralgias. If the first application does not speedily terminate the neuralgia, those who have used this mode of treatment direct that its application should be continued. It seems especially valuable in the relief of neuralgias of the trigeminus. It also seems of value to be applied along the spine, particularly at painful points in what is called spinal irritation.

Bacterian Eruption in an Articular Wound.

At the French Congress of Surgery, M. Nepveu read notes of the case of a woman, aged 36, who had sustained an injury from falling on her hands. The third phalanx of the thumb was severely dislocated, with a large superficial wound. Local antiseptic treatment with corrosive sublimate and iodoform was adopted. A vesicular eruption appeared, which spread from the hand over the whole body. This was checked by an iodoform dressing. There was no lymphangitis. On examination, a quantity of bacteria was found in the contents of the vesicles. The eruption followed the suppurating arthritis set up by the wound.

Chrysarobin and Salicylic Acid in Psoriasis.

Dr. George Henry Fox, in the second edition of his Photographic Illustrations of Skin Diseases, speaks of a combination of chrysarobin, salicylic acid, and collodion, for the external treatment of psoriasis. The formula which he advises is as follows: Chrysarobin, 10 parts; salicylic acid, 10 parts; flexible collodion, 100 parts. This combination is known at the New York Skin and Cancer Hospital as the Compound Chrysarobin Pigment. Dr. Fox speaks very highly of this treatment. Chrysophanic acid causes more staining of the integument, and sometimes excites a pretty severe dermatitis, besides injuring clothing. This combination does not produce these unpleasant results.

The Treatment of Syphilitic Condylomata.

Dr. A. G. Parsons, of Durham, N. C., writes to the *Med. Record* that he has tried the following ointment in many cases of syphilitic growths on the scrotum, and around the anus, and has never met with a failure:

R.	Morph. sulph	gr. ij.
	Pulv. camphor	gr. xx.
	Bismuthi subnitrat.,	
	Hydrarg. chlor. mitis	āā ℥ iss.
	Cosmolin	℥ j.

Sig.—Wash with soap and water, and then rub the ointment in thoroughly twice a day.

In a few days, Dr. Parsons says, the warts will be found to have entirely disappeared.

Home-made Apparatus for Pott's Disease.

Under this title Dr. C. F. Taylor (*N. Y. Med. Jour.*) describes a new and very cheap supporting brace which can be manufactured in any house, and which accomplishes very much the same ends as the steel brace which bears his name. A piece of ordinary blotting-paper about the size and shape of the muslin part of a vest is impregnated with shellac and moulded to the back of the patient. It dries and is removed, and on it is built up a shell of alternate layers of linen prepared with glue and blotting-paper with shellac. The completed shell is light, firm, and very durable. Buckles are added and the apparatus is used with the ordinary Taylor apron. Its chief use will lie, of course, among people unable to afford a steel brace and in places where it is impossible to have access to a surgical instrument-maker.

A Case of Recovery After Complete Separation of Finger.

Dr. W. E. Ryon thus writes in the *Med. Herald:* Was called on the evening of July 10th to attend the little four-year-old boy of Mr. James Bryant, who, in playing with a hatchet, severed the index finger of the left hand through the joint, and when I saw him, some three hours after, found the finger hanging by the smallest imaginable portion of skin on the palmar surface. I at once proceeded to bring the parts together, and with three or four stitches, and a couple of splints, secured them in perfect apposition. The result was wonderful indeed, as the wound healed by first intention, and now, about one month from the time

of injury, the little fellow is using the hand as he pleases, his father having told me several days since that he found him in the barn-lot building cob-houses, and that he was using the wounded hand just as the other.

Fracture of Sternum.

Dr. Wm. Horrocks thus writes in the *Brit. Med. Jour.:* Wm. C., a sailor, aged 58, was seen as an out-patient at the Liverpool Northern Hospital. A plank caught him under the end of his breast-bone, which he felt break. When he coughs or makes an effort, he feels pain shoot from the epigastrium to the back. At the lower end of the sternum is seen a small transverse ridge, which is readily reduced, but returns on removing the pressure. On coughing, the piece of bone sinks into its normal position. When replaced, on lateral movement, bony crepitus is readily obtained. The broken fragment is one inch and a quarter in length and a quarter of an inch in thickness. The fracture is transversly through the ensiform appendix, the upper or broken end of which is displaced on the front of the sternum, while the lower end of the appendix projects forwards.

Intra-Peritoneal Injections in Acute Hæmorrhage.

Rutgers (Ctrlbl f. d. med. Wissensch, August 7, 1886) reports the case of a woman who had lost so much blood from post-partum hemorrhage that she was apparently moribund. The veins did not swell on applying ligatures above them, so that it was impossible to employ intra-venous injections. The following solution was injected into the abdominal cavity through a cannula:

Salt,	90 grains.
Sodium hydrate,	5 grains.
Distilled water,	34 fluid ounces.

After experiencing severe pain in the abdomen for three days, during which time the temperature was subnormal, the patient rallied and did well.

An Epidemic of Boils.

Dr. Al. Hergott (Nancy) communicated to the *Annales de Gynécologie* a series of cases of boils transmitted from one woman to another at the Maternité Hospital, by the common use of a basin which had not been sufficiently disinfected. Five women had an eruption of boils in the gluteal region. The manner in which the epidemic appeared left no doubt as to its origin. The basin, which was the vehicle of the disease, was washed with *liqueur de Van Swieten*, and no fresh cases occurred. The fact shows very clearly the importance of thoroughly disinfecting all utensils that are to be emplayed by more than one person. M. Gingeot states that the best method of transmitting boils with cultivations of fluids, is to dip a camel's-hair brush into this fluid, and brush over a hairy part, so as thoroughly to impregnate the orifices of the glands. This method is practically the same as that by which the contagion at the Maternité at Nancy was caused.

Intussusception in Children.

Dr. W. E. Foster, (*Am. Jour. of Obstet.*,) gives us a very interesting paper on intussusception in children, the diagnosis and treatment of the same. He men-

tions that in making a diagnosis we are to look to the character of the evacuations which resemble dysenteric discharges, but contain more blood and less mucus than these discharges. We may expect to find a tumor which can be felt by palpation over the abdomen, and the pain will be great and resemble somewhat the pain of colic, also in those cases that have come under his observation the sphincter ani has been very much relaxed. Then the constitutional reaction, the throes and straining without passing feces but with passage of blood, are the characteristic symptoms. He recommends a very practical instrument for giving injections of air and water in a carbonic siphon attached to a syringe tube, and by pressing the cock the injection and amount can be regulated at will. He can not agree with some authors in believing that we should trust to nature to cure these cases, as the per cent. of natural cures is quite small, and even if the portion that has been occluded sloughs, the patient will probably die of exhaustion if left to nature.

Late Ocular Symptoms of Syphilis and their Treatment.

ABADIE (*Annales d'oculist.*, May–June, 1886), again urges the advantages of his method of subcutaneous injections of mercuric bichloride in the late ocular lesions of acquired syphilis and constitutional syphilis. These lesions are characterized by their complex nature and the slowness of their evolution. Chorio-retinitis is frequently accompanied by chronic iritis, and even by parenchymatous keratitis. Many of these cases heal spontaneously, without treatment, while others show a very disquieting tenacity, which resists all treatment until the hypodermic mercurial injections are employed. This latter method of treatment gives good results also in certain forms of chorio-retinitis limited to the region of the macula. In cases of isolated paralyses of the cranial nerves or twigs of nerves, without cerebral complications, the extreme rebelliousness of the trouble is successfully conquered by the hypodermic method of treatment. For this purpose ABADIE employs a solution of mercuric bichloride, 1 part; sodium chloride, 2 parts; and distilled water, 100 parts. He injects on alternate days, 20 drops of the solution beneath the skin of the back, and makes gentle massage over the spot afterward.

The Micrococci of Scrofulous Affections.

At a recent Congress at Nancy, M. BOUCHERON made a statement with regard to his researches, in conjunction with M. Duclaux, on the micrococci of scrofulous affections. These gentlemen sought to ascertain whether microbes were to be met with in scrofulous affections other than lupus. They selected impetigo for their examinations, and found a microbe having the aspect of a small chain of diplococci and of zooglœic masses. They submitted it to cultivation, and injected into the veins of a rabbit two or three drops of a fifth cultivation, which speedily caused death. The necropsy showed only slight lesions except in some cases, where there was sero-fibrinous pericarditis; but there was an abundance of micrococci in the blood. Inoculation with a first cultivation-fluid produced lesions later on. Injections into the trachea, and mixing the cultivations with food, had no injurious effect. These cultivations, mixed with fresh lard and applied to the skin, may cause localized gangrene and glandular hypertrophy. A strong culti-

vation-fluid, injected into the cornea, produced keratitis and hypopyon; and a weak one caused slight detachment of the lamella of the cornea—phenomena analogous to those produced by a microbe in acne of the nostrils and eyelids. M. Boucheron does not believe that there can be purulent infection.

Rupture of the Appendix Vermiformis.

Dr. THOMAS H. BRIGGS thus writes in the *Med. Age.* S. E. Bryant, male, 45 years of age, came under my observation on the evening of the tenth of September last. I found him suffering great pain, and had been for the thirty-six preceding hours. A diagnosis of biliary calculus had been made. On the morning of the eleventh I found him free from pain. Temperature, 96°; pulse, 100; hands and feet cold. On the thirteenth, death occurred from what I concluded to be a shock, resulting from rupture of the gall-bladder, or ductus communis choledochus. The temperature did not rise above 96° after I was called. During the last fifteen years he had suffered more or less each year from very acute pain, which usually left him in a few days.

Autopsy thirty hours after death. On exposing the liver, its bladder and ducts were found perfect in every respect, with no evidence that there had ever been any trouble with them. Quite an extreme effusion of the liquid contents of the bowels was found in the peritoneal cavity. The appendix vermiformis was ruptured about the centre, which was the seat of ulceration. The case proves that appendix vermiformis may be a cause of extreme pain during a period of years. Can such a condition be determined during life, and would we not be warranted in surgical interference?

Hard Chancre of the Vagina.

A case of hard chancre of the vagina is related by Dr. BOCKHART, in the *Monath. für prakt. Derm.*, No. 12, which is interesting from the manner in which it originated, as well as from the fact that the hard sore is very rarely found on the mucous membrane of the vagina, partly because of its histological formation and because, too, sores here heal quite rapidly. A woman who had never before contracted syphilis, although she had often had coitus with an infected man, experienced pain after each connection during the fortnight before she was seen, and after each intercourse drops of blood came from the vagina. Examination showed an undoubted hard chancre in the middle of the posterior vaginal wall. There were no secondary symptoms. The man had moist patches about the frænulum. The origin of the infection was this: The man, who was in the habit of performing the act several times during the night, always used at the first onset a so-called *stimulating condom* to increase the woman's genital excitation, and left it off during subsequent copulation. The instrument mentioned consisted in a thick rubber condom having rows of rubber prongs on its surface so arranged that they flatten out as the penis enters the vagina, but upon withdrawal stand out and irritate the vagina and, undoubtedly, when often used, cause erosions. An erosion having been produced in this way, the syphilitic virus found entrance from the man's mucous patches, and the perfect induration resulted, where, without the loss of substance, spontaneous healing would have been looked for. Symptoms of constitutional syphilis soon appeared.

Removal of Depressed Fractured Bone of Skull.

To a recent meeting of an English Medical Society, Professor HUMPHRY. showed a boy who had recovered after a severe injury to the skull. He was admitted into Addenbrooke's Hospital on August 23d, suffering from a compound fracture of the frontal bone, the result of a kick from a horse twenty-four hours previously. There was a wound three inches in length and a fracture two inches in length, with a gutter depression. He was unconscious, but could be roused. The depressed portion was removed, by sawing the contiguous bone with a Hey's saw and elevating the depressed bone. The dura mater was not injured. The boy appeared no better for the operation the next day, and only on the fourth or fifth day became conscious. Soon after he completely recovered. Professor Humphry commented on the great fluctuation in the treatment of injuries to the skull that had taken place during the century. In olden times the practice was always to trephine, and the patients almost all died. The tendency afterwards was not to trephine at all, and the results were more satisfactory. Recently, since the introduction of antiseptics, operative interference was more frequent, and the cases better selected. He thought the compression symptoms were due, not to the depressed bone, but to the injury to the brain at the time of the accident, and the removal of the depressed portion often appeared to give no immediate relief, as in the above case, though it might prevent the onset of inflammatory affections from the irritation of sharp pieces of bone. He would advise operative interference in cases of compound fracture of the skull with depression, but not in simple fractures.

A Unique Case in Minor Surgery.

Dr. W. A. BARTON thus writes to *Daniel's Texas Med. Jour:* Having had recently a rather unique case in minor surgery, I thought to give a sketch in your valuable journal.

Mrs. J. K. applied for advice in regard to a foreign body, which she thought to be a pin or needle, which made its appearance some ten months since, in the left mammary region. I found the body located in the fifth intercostal space, lying obliquely with point directed downward and outward, with head deeply imbedded in superficial fascia. As the point lay immediately beneath the integument, I thought to make an incision just over it and use small forceps, would be all that was necessary; but I found it almost impossible to get a hold on it, it being in the loose fascia. Having gained the patient's consent, I concluded to use an anæsthetic. I then had Dr. Welsh called, who came, accompanied by Dr. Burk, both of this place. They agreeing with me, we at once proceeded. After getting a good state of anæsthesia, we made an incision the length of the foreign body, cutting well down and separating the gristly cyst in which it was incased.

It was found to be an iron pin, very much corroded, so much so that it came out in three pieces, which, being placed together, gave the outline of the pin. The incision was immediately closed by two or three interrupted sutures, and the wound dressed antiseptically.

I have written these few lines for information, as the patient could furnish no clue. She does not recollect to have swallowed a pin or to have stuck one in her person. If any one feels disposed to give a few suppositions, or ideas, in regard to it, they will be thankfully received.

Deep Injections of Yellow Oxide of Mercury in Syphilis.

Dr. SHAPEK gives, in the Proceedings of the Kieff Medical Society, an account of some observations made in Prof. Stukovenkoff's clinic, on the employment of yellow oxide of mercury injections, in the condylomatous stage of syphilis. The solution used was prepared by rubbing up sixteen grains of the oxide with twenty of gum arabic, and an ounce of water. The injections were made not hypoder mically into the subcutaneous tissue, but, according to a plan recommended by Prof. Smirnoff, of Helsingfors, the needle, which was four or five centimetres in length, being plunged almost vertically into the gluteal muscles. In three cases five injections were given; in one case, four; in one, six; and in one case, ten injections were administered at intervals generally of a fortnight; a grain of the yellow oxide being introduced each time by means of two separate punctures on opposite sides of the middle line. In some cases, however, half a grain was injected weekly. The writer found these injections well borne by patients, only very slight local signs of irritation being induced, and in many cases none at all. In one case there was a hard swelling as large as a nut, but it was not painful, and soon passed away. The mercury, too, was always very quickly absorbed, being detected in the urine in four of the five cases after the lapse of twenty-four hours from the first injection, and at the end of forty-eight hours in the other two cases. Dr. Shapek remarks that this method is inexpensive, simple, and efficacious, and will probably be found particularly useful in what in this country would be described as club, union, and dispensary practice.

Suture a Distance.

At the French Congress of Surgery, M. ASSAKY made the following communication concerning *suture à distance*, and on the surgical applications of grafting animal tissues. *Suture à distance* is employed in order to restore the continuity of an organ in cases where the separated portions cannot be brought together. The suture-threads join these parts more closely together. The threads are of catgut, and it has been proved that these threads place the organs in a particularly favorable condition for the reproduction of tissues. This method of suture has, up to the present time, been used only for nerves and tendons. M. Assaky stated that in both of these cases he had found the results satisfactory. *Suture à distance* in nerve tissue has recently been adopted after the ablation of a neuroma; also in cases where a portion of a nerve has been destroyed by being impacted in a new formation; likewise when nerves are imprisoned in a callus, and in secondary nerve sutures in which direct re-union is impossible. The application of *suture à distance* should not be limited to the surgical treatment of tendons and nerves. It should be employed in rupture of muscle when the muscular tissue is not deteriorated; in cases of loss of bony substance, whether the periosteum is preserved or not. It appears probable that catgut, stretching from one fragment to the other, keeps the place to be occupied by the future bone, and helps ossification. Catgut may also be employed after resection of joints; artificial ligaments would thus be formed which would be rapidly converted into fibrous bundles. M. Assaky then stated that it was quite possible to transplant tissue from one animal to another of a different species or class.

Excision of the Larynx.

At the French Congress of Surgery, M. Léon Labbé described three cases in which he had excised the larynx. The first was for a large sarcoma, in the interior of the larynx, which had extended into the pharynx, so that deglutition became impossible. The patient was cured, but died from pneumonia five months after the operation. The second was for epithelioma, with enlargement of the neighbouring glands. The operation was easily performed, but the patient succumbed in consequence of the cannula not having been changed, as had been directed, and death ensued on the fifteenth day from septic pneumonia. The third patient was suffering from an epithelial sarcoma of the larynx, which impeded respiration; the glands were not affected. On the larynx being isolated, the patient turned pale and death-like, probably from contusion of the pneumogastric nerve. Artificial respiration was carried on for twenty-six minutes. The operation was then recommenced, and the patient recovered, and lived for four months and a half. In conclusion, Mr. Labbé recommended that tracheotomy should be done, as low down as possible, several weeks or months before the operation. The patient should be anæsthetised by means of the tracheal cannula; but he should be previously accustomed to the presence of the cannula in the windpipe. The best incision is a T-shaped one, the transverse cut corresponding with the thyroid body. After the first incision, it is better to employ small knives. The larynx should be isolated and pressed together as far as possible. It should then be divided from top to bottom, the epiglottis, however, being preserved as far as possible. The upper part of the wound should be sewn up, and an œsophageal sound inserted. The patient may take nourishment from about the fifteenth day after the operation.

Ulcerating Post-natal Nævus.

Mr. Richmond Leigh reports this case in the *Lancet:* A. G——, aged four weeks, when first seen, had a peculiar nævoid patch in the right temporo-malar region, about six inches in length by two and a half in width. There were similar smaller patches on the upper lip and ear, and others, very small, in the scalp. The various patches had each the exact appearance of a nævus, were slightly elevated above the surface of the skin, and varied in vividness of color according to the state of the circulation, being brightest when the child was excited, especially when crying, and palest when it was sleeping. The main patch was slightly ulcerated in places. The first appearance of the disease was at the age of two weeks, and the growth had since then rapidly increased to the size mentioned. The child's general health was good; it was well-nourished, and had only its mother's milk. The disease improved slowly under treatment, disappearing in some parts while extending in others; but, on the whole, not much progress was effected. Ethylate of sodium was applied to a portion of the growth several times, but without good effect, the scab caused by it, on being shed, leaving an ulcerated surface. This ulcerative tendency prevented the use of strong remedies, and, in spite of treatment, proceeded, in the patch affecting the ear, almost to gangrene, eating through a portion of the lobe. No ethylate had been used to this part. Subacetate of lead and zinc ointments were used with some ad-

vantage, lessening the ulcerated surface, which was also effected by boracic cod-liver oil. Iodide of iron was given internally.

The parents leaving town, the child passed from under observation, the disease being still extensive, and having a malignant look in places. In spite of this, the child's health was better than it had been, the mother remarking that it was "getting fat." The case was under treatment for a little over four months, and when last seen the disease was rather less than at the beginning of treatment.

An Operation for the Relief of Tinnitus Aurium.

Dr. Frank G. L. Connell thus writes in *The Med. Age:* Isadore B., a laborer, æt. 40 years, came under my care in June last for the relief of a constant singing noise in his ears, which rendered him too deaf to hear conversation in any but a very high tone. He had suffered for years and had been treated thoroughly by means of the Pulitzer and other methods, but no treatment had thus far given any relief. He could not hear the ticking of a watch unless it was held against the ear, and both ears were alike deficient in usefulness. Examination with reflected light showed the membrane of the tympanum on each side slightly more opaque at the point where it blends with the manubrium of the malleus than I had ever noticed in such cases. On holding the nose and inflating the eustachian tube during the act of deglutition it was apparent that air passed readily through the tube to the cavity of the tympanum. As a means of relief in such cases I had in mind the operation of incision of the membranum tympani as first advocated by Sir Astley Cooper, but in this case I thought best to modify this operation and carry my incision around one side and end of the handle of the malleus so as to liberate almost entirely that organ from its attachment to the membranum tympani. My patient was then directed to hold his nose and blow, when the air was observed to stream through the incision, demonstrating that the section had been made complete as Cooper advised. The disagreeable noises in his ears ceased at once, and his hearing became so acute that he had no trouble whatever in hearing my voice in ordinary tone.

I believe in many cases the cause of the roaring noise and hard hearing is due to inflammatory infiltration of the tissue of the membramum tympani in the vicinity of its attachment to the handle of the malleus. This infiltration made the membrane firmer, and its movements in consequence of aerial vibrations are stronger and more readily conducted to the sensory nervous apparatus of the ear. The operation I have here proposed cuts off the excessive vibrations of the tympanum from the handle of the malleus, yet leaves attachment sufficient for the purpose of normal hearing.

Living Nearly a Year with the Neck Broken.

Dr. W. H. Shepherd thus writes in *Gaillard's Med. Jour:* The Baltimore *Sun* of November 3, 1886, contained the following: "Mr. George W. Davis, the Norfolk machinist, who died on Sunday last at 526 Hartford Avenue from paralysis, superinduced by an injury of the spinal column, was buried yesterday by the Knights of Labor. Drs. Robt. W. Johnson and A. A. Chewell deemed Davis's

case an extraordinary one, from the fact that he lived eight months with his neck broken; and they decided upon a post-mortem, which Dr. Johnson made. The examination revealed a fracture of the third cervical vertebra. Mr. Davis's injury was caused by a fall of about ten feet during last March, which incapacitated him from work but a short time, although he was continually in pain. He came here six weeks ago, and paralysis gradually set in, the pain meanwhile increasing in intensity up to the time of his death."

As throwing some additional light upon the case above referred to, I will say that on the evening of December 15, 1885, I was called to see Mr. Davis, who had just a few minutes before fallen from a platform to the floor, a distance of some four, or possibly five, feet, striking the back or side of the neck upon a railing which surrounds the platform. A very brief examination of his injuries as he lay upon the floor so convinced me that there was a fracture of a cervical spinous process, with subluxation of one of the articulating facets or apophyses (the unilateral dislocation of Malgaigne) that I had my friend Dr. O. F. Baxter called before attempting anything for the patient's relief. Some degree of extension and appropriate manipulation promptly reduced the luxation, the result being manifested by the disappearance of all visible evidence of the injury, and restoration of ability to make the several movements of the head and neck; all motion, however, greatly increased the already severe pain, which extended to the shoulder, arm, and side, and which continued very marked for some ten days, notwithstanding a liberal use of morphia. There was no paralysis noted at any time during my attendance, which continued thirty-one days, and at the expiration of which I found Mr. Davis sufficiently recovered to resume his usual work, though still suffering some pain.

Dislocation and Fracture of Metatarsal Bones of Both Feet—Immediate Application of Plaster-of-Paris Bandages—Excellent Results.

Dr. H. S. BIRKETT thus writes in the *Canada Med. and Surg. Jour.* for October:

E. Le J., aged 22, bricklayer, admitted 25th June, 1886, suffering from injuries to both feet. The same morning, whilst working on a scaffold, patient struck the roof of the house with a board he was carrying, throwing him a little backwards; this caused him to step off the scaffolding, and he fell, alighting on his toes upon a heap of stones and dirt, a distance of 20 feet. Upon examination, the following was the condition of the feet:

Left Foot—Large painful swelling extending from external and internal malleoli behind, forward to the metatarso-phalangeal articulations. Plantar arch not well marked, foot being rather flat. Slight foreshortening. Find the 1st, 3d and 4th metatarsal bones dislocated upwards, backwards and inwards, the bases being distinctly felt beneath the skin, their prominence being obscured by the great swelling present.

Right Foot—Dorsum swollen moderately, and to same extent as left foot. Plantar arch lost; 2d, 3d and 4th metatarsal bones dislocated upwards, backwards and inwards, the bases being easily felt beneath the skin. Crepitus felt over the dislocated metatarsal bones of both feet.

Under ether, the dislocations were easily reduced, the fragments kept in posi-

tion by pressure with absorbent cotton, and both feet put up in plastar-of paris bandages.

Next day there was considerable pain and swelling of both feet, though the circulation and sensation was good, therefore a strip a quarter of an inch wide was removed from median line of both splints, which were then kept in position by bandages.

Perityphlitic Abscess Discharging Spontaneously at the Umbilicus.

In the *Practitioner* (October, 1886), is recorded the following interesting case by Mr. WILLIAM PUGIN THORNTON, M. R. C. S.;

"Early on the morning of August 1st, 1884, I was called to see a youth. He was slightly made, but very tall for his age. Lying on a bed, his face face covered with prespiration, his body and limbs were cold, and his knees drawn up, and evidently he was in great pain. He was constantly sick, vomiting an almost stercoraceous fluid. The abdomen was tense and tender to the touch, especially in the right hypogastrium. His temperature was not very high, but having lost the record of the temperature I am unable to give any in connection with this case.

"This account given me was that for a week he had been over-worked, being at his office from 9 a. m. to 9.30 p.m. He then took a day's holiday, walking about twenty miles, and eating very little during the day except some hard apples. On reaching home late in the evening he had a substantial dinner, and went to bed shortly after. He slept through the night, but felt tired the next morning, and had little appetite throughout the day. He went to bed at 10 p. m., and slept till midnight, when he woke up with pain in the abdomen round about the navel; being sick and the pain increasing, he called the servant up, who put hot flannels on him, and obtaining relief he fell asleep till 7 a. m. He then woke with intense pain, and was sick about every half hour. I saw him at 8 a. m., and again at 11 a. m., with my partner, Mr. T. Whitehead Reid. We could come to no accurate conclusions. Later on some of the symptoms pointed to typhoid, but, taken all together, they did not satisfy us it was that disease. We treated the acute symptoms, sickness and pain, and on hearing the account of apples eaten on an empty stomach we gave castor oil with tincture of opium.

"Nine days after it was evident that there was a collection of pus in the right hypogastric region. My partner and I considered the advisability of opening the abdomen. In the middle of the night (the 10th), the patient was alarmed by a gush of fluid through the navel. This proved to be pus, and the discharge continued through the night. In the morning I pressed out from a pint and a half to two pints. After a time he learnt to pass a catheter through the umbilical wound, and to syringe out the abscess cavity with Condy's fluid. The catheter disappeared a distance of nine inches."

On September 18th, the visits to the patient were given up, and shortly after he went away. On November 6th an umbilical fistula, three inches deep, was all that remained. At Christmas time the wound was healed.

It would seem that in this case there was ulceration through the appendix vermiformis, followed by a deep abdominal abscess, and that it belonged to one of

the interesting classes which Dr. Fenwick mentioned in his Clinical Lectures at the London Hospital, published in the *Lancet* in December, 1884.

Excision of the Hip in Pulmonary Tuberculosis.

In *Le Progres Medical*: H. BRESSON reports the following case, which bears on the question of surgical intervention in tuberculous subjects. E. G., æt. 9 years, came under treatment May 16, 1885, for hip disease on the left side. No precedent tuberculous history, either personal or family. The beginning of the disease was obscure: for two months there was pain and lameness, and the child was kept in bed for four months. She then went about for six months, until the pain and lameness returned. The limb now shortened and rotated inwards, and soon intense pain at the knee forced the child to go back to bed. The cautery was used without result, and the condition became worse. She was then kept in immovable apparatus for three and a half months, and was afterwards free for six months, her condition having improved. At this time she already coughed a great deal; was pale, thin, without appetite, and with persistent diarrhœa, no albumen in the urine, consolidation at the apices of the lungs, moist râles, etc. The following month an abscess appeared at the upper and outer part of the thigh. At the commencement of July, aggravation of the symptoms suddenly took place, with sub-acute inflammation of the joint, and strong fever was observed on the 21st. The purulent collection was opened under strict antiseptic precautions. Throughout the month of August the temperature oscillated between 38° and 40°. Although the tuberculous condition of the lungs caused a long hesitation, at the urgent request of the family, and in consequence of the daily aggravation of the child's condition from the copious suppuration, Dr. Cazin determined to excise the hip, which was done on August 30. The temperature fell from 40.2° and oscillated between 37° and 38° for a fortnight, when it returned to the normal. The wound, which was scraped at the bottom by Volkmann's spoon, united by first intention, and presented nothing untoward. Six weeks afterward a silicated apparatus was applied and the child began to walk with crutches. Since two months she has quitted the infirmary, her condition becoming better every day, appetite returned, sweats and diarrhœa disappeared, putting on flesh, and the stethoscopic signs considerably improved. On March 1 there was scarcely any appreciable dulness at the right apex, and only at the sub-spinous fossa of the same side can a little crepitation be heard on coughing. The child wears no local apparatus, can walk without crutches, and the limb is only shortened 1½ centimetres.

Her condition at the time of operation was almost hopeless; six months after, her general health was as satisfactory as possible. The result, no doubt, depends largely on the strict antiseptic precautions; and in freeing the patient from the constant loss by suppuration, her system was put in a better position to resist the pulmonary lesion.

Syrup Trifolium Compound in Syphilis.

Dr. G. HENRI BOGART thus writes in the *Med. Age.*. Being dissatisfied with the routine treatment of secondary, tertiary, and hereditary syphilis, I resolved on an early trial of syrup trifolium compound.

I had in my family a domestic, aged eighteen, female.

She had suffered with an anomalous (and occasionally severe) form of dysmenorrhœa, since the first appearance of menstruation, four years before, as well as a persistent general itching sensation of the surface of the body.

She had previously resided with an excellent general practitioner near her own home, and both his treatment and mine were of no avail.

Any idea I may have had of syphilis was precluded by the early age of the appearance of the disease, and the virtuous habits of the patient (although this latter does not count for much).

Happening to visit her home in May, 1006, I found that the father had been a soldier in the civil war, and after a sojourn of several months in a hospital, was discharged for "general debility," and had been in a state of chronic ill-health since his return.

My course was now clear. I placed her on the syrup trifolium in drachm doses in the morning, and two drachm doses at noon and evening.

As there was slight habitual constipation and anorexia, I added :

Fl. ext. cas. sagrada,	℥ j.
Tr. gentian,	℥ vlij.
Fowler's solution,	℥ j.

in half-ounce doses at morning.

Her next menstruation was comparatively free from pain, and the next normal, when I discontinued the remedy, as the cutaneous trouble was also cured.

The cure remains complete.

I now induced the father to use the remedy, but with entirely negative results, although pushed to three-drachm doses.

In June a gentleman from Ohio called at my office.

His brother contracted syphilis four years before, and, becoming impatient with his physician, committed the common mistake of consulting a charlatan.

About a year ago he became affected with cough, night-sweating, and general emaciation, and discharged three physicians for telling him that his lungs were sound, and his complaint specific, he having an idea that "consumption was eating him up."

As I was only wanted to furnish medicine, I put him on the same treatment, with the addition of nitro-muriatic acid bath (which I also ordered in the case of the girl's father), three times per week.

Afterward they sent for more medicine, stating that the patient was much better.

I expressed them what they wanted, and about a week ago I received a letter stating that he is now well, and enclosing a check for further fee.

I should have reported sooner, only I was waiting to hear from this last cass.

Localized Elastic Sponge Pressure.

Prof. C. Weil has for some time past been making use of pressure by sponges in several different classes of cases in which continuous and evenly distributed pressure seemed to be indicated. He now gives the results of his experience of this method in some articles in the *Prager Medicinische Wochenschrift.* The

plan seems to have been first proposed by the late C. von Heine, and was mentioned by Professor WEIL as long ago as 1877, at a meeting of the Prague German Medical Society. The plan adopted is to envelop the whole part in a firm plaster-of-Paris or soluble silicate bandage, and when this has set, to cut a "window" in it exactly corresponding to the area over which pressure is required. Wedge-shaped pieces of sponge are then packed into the "window." This sponge-pad is kept exerting constant pressure by the application of a strongly stretched india-rubber band encircling the whole part over the plaster-of-Paris bandage. The sponge should be of a fine quality, with small pores. It must also be quite clean and free from sand, but this must be effected by beating, and not by washing, which causes a loss of elasticity. Professor WEILL knows of no other means of producing such rapid resorptive effects as sponge pressure, and he cautions his readers that if not carefully watched the articular synovial membrane and ligaments may become seriously impaired by the strong and constant pressure exerted on a joint. As a rule, the application must be removed and renewed every twenty-four hours, even when the patient is free from pain—as, in fact, is usually the case. After the first twenty-four hours an extensive exudation is found to have greatly diminished, the skin being blanched, wrinkled, and dried up, with here and there little yellowish bullæ, showing the situation of the pores of the sponge. Sponge pressure was successfully employed in hydrarthrosis of the knee. Here the plaster-of-Paris bandage was applied to the thigh and leg, fixing of course the joint; the bandage, too, was carefully strengthened on the posterior aspect. The next day a "window" was cut out, so as to expose the anterior and lateral aspects of the joint. Three thick wedge-shaped pieces of sponge were then applied, a large one over the upper portion of the joint, and two smaller ones at the sides of the patella, the patella and its ligament being free. The sponges were kept *in situ* by an assistant, while the interstices were filled up with cotton-wool, and an india-rubber bandage tightly applied over all. This was allowed to remain for twenty-four hours. No pain was felt, nor was there any swelling of the foot, or blueness or numbness of the toes. When the bandage was removed the swelling was seen to be greatly reduced. The bandage was reapplied with new sponges, but not so tightly as before. In two days' time the swelling was no longer perceptible; after this, light pressure was continued for a few days. The plaster bandage was then removed and the slight return of the effusion produced by movement of the joint controlled by massage. The sponge pressure proved useful in many other affections of the joints, bones, and tendon-sheaths, also in angiomata and herniæ. Professor WEIL proceeds to give some interesting particulars of a case of rheumatoid arthritis, another of a very large angioma of the infra-axillary region, and some of very large herniæ, in all of which sponge-pressure proved very useful.

Unique Case of Injury to the Ear.

Dr. LOUIS J. LAUTENBACH reported the following interesting case at the meeting of the Philadelphia County Medical Socieety, on October 20, 1886.

J. H., aged 36, salesman, came to me February 18, last, on account of a ringing, a feeling of fulness and deafness of the right ear, which he said had come on the previous afternoon. Up to this time, according to his statement, his ears

had been of equal hearing power, and he had noticed no defect nor suffered any inconvenience from either ear. On the afternoon of the 17th, while walking along the railroad, the New York express, going in an opposite direction, went past him, his right side being toward the train, when he suddenly experienced a sharp pain in the right ear, which was accompanied by deafness, a marked degree of ringing and fulness being experienced immediately. The pain soon disappeared, but the dulness, ringing and fulness were present when he presented himself to me.

When examined he had no pain, but yet there was slight tenderness occasioned by pressing on the tragus. The watch (of which the average hearing distance is 52 inches) was heard at 11 inches with the right ear and at 3½ inches with the left. The tuning fork aerially was heard equally in the two ears, but by bone conduction it was heard very much more loudly in the left ear. The anterior wall of the meatus was found to be quite red, and at about three-eighths of an inch within the tragus a stiff, hair-like body was seen to be inserted; following the course of this body inward it was found to perforate the membrana tympani immediately below and very slightly posterior to the insertion of the manubrim of the malleus. The awn or beard of wheat (for this is what subsequently the foreign body was found to be), was wedged between the inner wall of the tympanum and the wall of the meatus, being bent like a bow. The membrane was decidedly concave outward, it was tense, it was very much congested, particularly along the handle. The outer end of the wheat beard was detached from the wall of the meatus, and by the forceps was withdrawn from the tympanum, requiring an appreciable amount of force—much more than I had expected to exert. As it was withdrawn, a little pus exuded, and this was followed by a drop or two of serous fluid. The hearing of the ear was now reduced to five inches, but the feeling of fulness, of dulness of hearing, and the ringing, entirely ceased. The left ear being examined showed marked evidence of middle ear catarrh. The tuning fork, by aerial conduction, showed no change, but by bone conduction it was heard only slightly (instead of markedly, as before), better in the left ear.

The foreign body was a piece of the awn, or beard, of a wheat grain, and was 24 mm. in length; its thick, flat end had penetrated the membrane, and its teeth, or saw-like points, with which it abounds, were directed forward; this explains the force required for its removal, as well as the reason why it lodged so readily in the wall of the meatus. Admitting that there was occasioned by the foreign body an increased hearing distance, it is an interesting question: How was it produced? It may be that the pressure exerted inwardly was sufficient to bring the stapes into a more nearly normal position, thus improving the hearing; the pressure being removed, the hearing diminishing. It is, however, far more probable that the ears were of unequal value before the accident, but that the patient took no note of the difference.

The Useful Administration of Arsenic in Diseases of the Skin.

Dr. Edward L. Keyes, in the *Journal of Cutaneous and Venereal Diseases* for August, 1886, thus discussed this mooted question.

Arsenic is distinctly a cutaneous stimulant; therefore, in the initial stage of

a malady possessing an inflammatory element (notably eczema), it is not only not useful, but may be actually pernicious. Used after the acute stage has been controlled by appropriate means, it often speeds the parting guest and prevents it from lingering in a state of prolonged and desperate chronicity. A fitting analogy is the use of friction and massage in joint diseases. This remedy is very efficient, but it has its time and place. When the joint is acutely inflamed, massage only adds fuel to the flame; but when the fire has been subdued, then the stiffness and loss of motion, perhaps otherwise inevitable, may be often overcome by the skillful application of massage. If the joint would get well without the massage, there is no call for its use, yet that it has its use can hardly be denied; and so with arsenic.

Arsenic, in my opinion, is not useful, unless the stomach tolerates it well and appropriates it in a kindly way. When digestion is interfered with by the use of arsenic, nausea or inappetence produced, it generally does no good, often harm. In such instances, preparing the stomach beforehand, changing the diet, disgorging the liver, giving attention to the patient's personal habits, will allow the remedy to exert an influence where, unaided, it would be without value or even harmful. The same remarks apply exactly to the administration of cod-liver oil, and often to the use of other tonics.

The different preparations of arsenic may be called into play here in selected cases. I have more than once taken a patient with chronic psoriasis, who had hopelessly given up the use of Fowler's solution because it troubled his eyes, ruined his digestion, and seemed to irritate his skin, and conducted him to a cure by combining arsenious acid with nux vomica and pepsin, with some change in diet, or by substituting the arsenite of soda for the arsenite of potash. The Bourboule water, a mild solution of the arsenite of soda, is a very gentle way of administering arsenic; too gentle as a rule, but yet I believe often effective of good, particularly in the case of weak digestion. Fowler's solution, especially if it has been long prepared, is very likely to disagree with digestion, and for this reason I seldom use it.

The more diffused, generalized and chronic that a given cutaneous malady is, the greater do I consider the indication for the use of a suitable preparation of arsenic, if the stomach will take it kindly. The more localized an affection is, be it ever so chronic, the less indication is there for arsenic in a general way, in my opinion.

Generalized chronic eczema, generalized psoriasis, and pemphigus, may, perhaps, be selected as the maladies in which arsenic may be expected to exert what may be termed a certain specific general effect in controlling the symptoms—exceptions to the contrary notwithstanding. Yet the combination of mild doses of arsenic with other remedies is not without value in some localized maladies, and in combating some forms of acne and some cutaneous manifestations of syphilis. Much also might be said, but more cautiously, in the case of neurotic maladies, as affecting the skin, and where an element of nervous debility keeps down the patient's general vitality, and prevents other suitable remedies from being effective.

In short, I think that there is so much value in the intelligent use of arsenic that it seems a sin to allow its association with that time-honored humbug, promiscuous blood-letting, as an appropriate analogy, to pass unchallenged.

Fluid Extract of Corn Silk in the Treatment of Cystitis.

Dr. RUSH M. BROWN thus writes in the *Med. Age*: Some months since, I had brought to my notice the use of the fluid extract of corn silk in inflammatory diseases of the bladder. The drug is usually given in doses of 10 and 20 drops, and given in this way it does give relief to some extent. But it occurred to me that as it had astringent properties, it would act more speedily if brought in direct contract with the mucous membrane of the organ.

After having tried many remedies usually prescribed in these cases, and after having administered the corn silk in the usual way, I determined to try a plan which I consider as original with myself. I procured Parke, Davis & Co.'s preparation and found it made a permanent cure in every case of pure and genuine cystitis.

My first case was that of a negro woman who came to me for treatment for a uterine trouble. She had been troubled with syphilitic ulceration of the vagina, but this I found on examination had been relieved by the treatment she had undergone in the hands of another physician. The uterus was normal, and her menstrual periods were regular. She complained of severe pains just above the symphysis pubis, and pains in micturition. She also had a slight mucous discharge after making water, which she thought was leucorrhœa, but I found that it came from the urethra.

I attached a small gum catheter to an ordinary Davidson syringe.

I first pumped as much hot water into the bladder as it would hold, that is, enough to thoroughly distend the organ. I then allowed her to get up and pass this off. I then put a teaspoonful of Parke, Davis & Co.'s corn silk to a half teacupful of tepid water, and injected the whole of this into the bladder, and ordered her to retain it as long as she could. At first it could not be retained more than 20 minutes or half an hour. The next day I called and she showed me a quantity of soapy-looking mucus, and she expressed herself as feeling much better. I did not repeat the injection this day, but used the injection of hot water as before.

After the first injection I ordered her to take 10 drops of the extract in a wineglass of water by mouth, three times a day before eating. I then used the injection twice a week, preceded by the hot water; she continuing the 10 drops internally three times a day every day.

The treatment was continued for six weeks, at the expiration of which time she was dismissed cured.

My second case was that of a white woman, who was suffering from a uterine displacement; this I had to correct before treating her bladder. She was under treatment for the bladder nine weeks; she was discharged at the expiration of that time, and has continued well ever since, and has gained flesh.

My third case under consideration was a negro man, who had gonorrhœa. The bladder was very much inflamed, I suppose from his having used a syringe and forcing the injections along with the gonorrhœal discharge into the bladder In two weeks he came to my office and said he was entirely well.

I will not say that the corn silk cured his gonorrhœa, for that was not the object in using it in this case.

Other cases I could report, which I have in my case-book, but I deem it sufficient to say that they were all treated alike and with the same result, but the time varied as to recovery.

The medical profession will find this drug a valuable addition to our materia medica, and well worth a trial at their hands.

But the treatment must not be left to the patient; the physician must use this method himself or put it into the hands of an experienced nurse, who understands introducing a catheter. I can confidently endorse Messrs. Parke, Davis & Co.'s preparation of this drug.

On a Case of Suppuration of the Mastoid Cells Simulating Intracranial Abscess.

Dr. EDWARD COTTERELL thus writes in the *Lancet:* In the following case it will be seen that the history and symptoms pointed apparently to an intracranial abscess, so much so that the question of trephining, with a view to evacuating the confined matter, was discussed; but before proceeding to this somewhat hazardous operation, a free opening was made into the cells of the mastoid process, with the result of completely relieving the urgent symptoms and ultimately curing the middle ear disease. In using the words "hazardous operation," I do not mean to imply that the operation of trephining is *per se* hazardous, because, with all the resources of antiseptic surgery at our command, it is difficult to believe that there is any risk in the operation when carefully performed; but the hazardous nature of the proceeding in an intra-cranial abscess consists in hitting off the exact spot to trephine in order to evacuate the matter. The difficulty in diagnosing the exact locality of the abscess is admittedly very great, as the symptoms are in most cases vague and unreliable, whilst the differential diagnosis between a limited collection of pus in the cerebrum or cerebellum, and between a limited or diffuse meningitis, is beset with difficulties which in the present state of our knowledge it is impossible to overcome; but I think that most surgeons will be inclined to agree with the following statement made by Mr. Hulke in reference to these cases. He says:* "However, the fact that the clinicist is not yet in the position to form a certain judgment concerning the precise nature of the local disorder does not, in the presence of the almost certainly fatal termination of the otitic intra-cranial abscess when left to take its natural course, exonerate him from further efforts; when his judgment attains a high degree of probability, the propriety of a surgical operation for the evacuation of the abscess should be faced."

H. F——, a young lady aged fifteen, has the following history: Nine years ago, whilst playing one evening, she introduced a bead into her left external auditory meatus, and in trying to extract it only pushed it further in. The next morning she was taken to see a medical man, who made fruitless efforts to extract it. Two days after this she was taken to another surgeon, who endeavored, whilst the child was under the influence of chloroform, to get the bead out; but he also failed. Nothing further appears to have been done, and chronic suppuration of the middle ear was naturally set up. Six months after its introduction the bead dropped out whilst she was having her ear syringed. But the expulsion of the foreign body did not cure the middle ear disease, and since that time she has suffered from chronic otitis media purulenta, the discharge being most offensive

*The *Lancet*, vol. ii. 1886, p. 3.

and often making her sick by trickling down the pharynx. In February, 1885, she began to complain of intense headache, accompanied with vertigo. Gradually she became very strange in her manner, getting very excited at times, screaming at the top of her voice, and biting her fingers, bed-clothes, or anything that came in her way. These symptoms became intensified at night, and her screams, or rather yells, quite disturbed the neighbors. Her head was shaved and ice applied to it. Large doses of bromide of potassium were administered in the day with chloral at night, but the symptoms rapidly became more severe and intensified; as photophobia came on the headache became very much worse, and about this time tenderness was noted over the mastoid process of the left side. The screaming fits now became much more severe and prolonged, and during her paroxysms she would jump up and throw herself about the bed, becoming very violent and attempting to bite any one who touched her. The optic discs were normal.

At this stage I came to the conclusion that the case was either one of meningitis or of abscess within the cranium, as the symptoms seemed too severe for pus pent up in the mastoid cells. Having obtained permission of her friends to operate, I determined first of all to trephine the mastoid cells, and see if that would do any good, though I confess I had no faith that it would; and should no pent-up pus be found there, I was prepared to trephine over the temporo-spenoidal lobe and explore that region for an abscess, or, if a limited meningitis were found, to wash out and drain—treating it in fact as an ordinary abscess. Accordingly, on March 9th, the patient being under the influence of chloroform, an incision was made over the left mastoid process, and the cells thoroughly opened up with a gouge. About a drachm of fetid pus was evacuated, and then a free communication was established between the external wound and the tympanum with a tooth elevator. A small drainage-tube having been inserted, iodoform powder was blown in and the wound dressed with iodoform wool. On recovering from the anæsthetic her headache was better, and she had no more delirium or screaming fits. The wound healed by granulation, small scales of dead bone occasionally coming away. It is now over eighteen months since the external wound closed, and since then she has been completely free from all discharge and from pain in her ear and head, so that I think she may be looked upon as cured.

Self-inflicted Bullet-wound, Laying Bare and Traversing the Brain; Bullet Removed from the Temporal Fossa on the Opposite Side; Recovery.

Mr. J. Astley Bloxam thus writes in the *Lancet:* The unusual result of such serious injury as is recorded in the account of the following case renders it specially interesting. It was true the injury was in the anterior part of the brain, where perhaps damage is less serious than in any other part; but the injury was so extensive and the danger of consecutive inflammation so great, from the injury by the bullet or from the presence of foreign bodies carried in by it, that the case will prove important in the literature of injuries to the brain. It was evidently not a case in which anything could be gained by the operation of trephining, and the expectant treatment adopted at first was fully justified by

the result. Cases are on record where the bullet in similar injuries has simply struck the side of the skull opposite to the point of entry, and then rebounded, merely leaving an indentation. Under such circumstances operation would be useless. Here the bullet appears to have passed completely through from side to side, partly concealing itself in the temporal muscle.

Tom S——, aged eighteen, was brought to the hospital early on Sunday morning, September 24th, with a gunshot wound of the head. The face and neck were both much swollen, and patient complained of pain in the left temporal fossa and at the back of the cranium. There was a wound three-quarters of an inch above and behind the external angular process of the frontal bone on the right side, involving both tables of the skull and exposing the brain, some of which lay in the wound; the edges of the wound were blackened and swollen, No loss of motion or sensation. Patient slept a good deal, but could not be easily roused. Pulse 62. The wound was cleaned and dressed antiseptically.

Sept. 25th.—Patient is semi-conscious. Evening temperature 100°; œdema of *left* lower eyelid. Respiration normal.

27th.—Patient was seen by Mr. Boyd, who felt beneath the skin in the *left* temporal fossa what appeared to him to be the bullet or a spicule of bone. Temperature 100.2°.

28th.—There is some subconjunctival congestion of the right eye.

30th.—An abscess was noticed pointing at the attachment of the temporal muscle on the left side, and poultices with belladonna were ordered.

Oct. 3d.—The wound is granulating and looks healthy; there is very little discharge. He complains of some tenderness over the temporal region of the opposite side. No loss of smell, speech, or memory. Tongue thickly coated. Patient says he feels very well, but is still drowsy.

6th.—Pulse 68, intermittent. Patient complains of pain and tenderness in the neck and between the shoulders. The wound looks healthy; the temporal fossa on the left side is fuller, and the bullet can be felt more distinctly, with fluctuation in its neighborhood. He passes his urine and motions unconsciously at times.

8th.—The patient says the tenderness is very great over the neck; he lies mostly on the right side. Pulse 64, feeble. He looks ill.

11th.—There was some wandering at night, and he objects to being moved. He passes his urine and motions unconsciously. Temperature last night 100.6°. The bullet, weighing about 2½ drachms, was removed to-day by Mr. Bloxam from its lodging in the temporal muscle of the left side, a quantity of pus escaping at the same time. He was afterwards delirious.

13th.—The patient looks better to-day, and has slept pretty well.

14th.—All the motions have been passed unconsciously since the operation. He takes food badly; is only semi-conscious. Slight discharge from both wounds, most from the left. Antiseptic dressings as hitherto. Right wound looks healthy; the left is filled by a blood-clot. Pupils respond properly to light. No strabismus. He is difficult to rouse, but when roused he converses rationally.

19th.—The patient passes his motions unconsciously, but knows when he passes

his urine. Ophthalmoscopic examination of eyes (atropinized) showed the discs to be clear; no optic neuritis.

21st.—Pain and tenderness along the course of the lymphatics on the left side of the neck. Breath smells very offensive. He is cheerful, but wanders a good deal. Bowels not having been open for three days, an enema was ordered to be given.

The patient gradually improved, becoming every day more conscious, and the wounds healed over without further complication. He was discharged cured on November 11th.

Fracture of Skull—Extravasation of Blood—Convulsions, etc., Without Notable Lesion of Brain Substance.

Dr. DAVID GARDNER thus writes in the *St. Louis Courier of Medicine:* On Saturday, Sept. 4, 1886, about 6 P. M., Thomas Calvard, æt. 33, was struck two blows with the barrel of a shot-gun, one blow falling over the left parietal eminence, not breaking the scalp, the other blow being also on the left side of the head, about one and one-half or two inches from the median line of the head over the fronto-paridtal suture, the wound being parallel with the sagittal suture. The scalp was penetrated to the periosteum over the posterior edge of the frontal bone. He was knocked down by the second blow, regained consciousness, was able to sit up in the wagon and to walk down a steep hill to avoid jolting. Upon his arrival at home he was assisted in walking into the house, complained of his breast and head, and seemed to appreciate that he was dangerously injured; was intoxicated at time of receipt of injury.

Saw the patient at 9 a. m., Sunday, Sept. 5; found him very restless, lying first on one side, then on the other, his limbs in a state of flexion. He could be aroused by shaking and speaking to him in a loud voice, but relapsed again into a semi-comatose condition. There was not a great deal of swelling of the wound. There was bulging of the orbit and some discoloration, pulse regular and nearly normal in volume, frequency and strength. He had urinated twice during the night, once voluntarily in the early part of the night, and once involuntarily towards morning. Bowels not open, tongue dry, brown, red at the sides and tip.

No paralysis was observable; no fracture of the skull could be felt at or near the wounds. The pupils were dilated.

I shaved the scalp around the wounds, introduced my little finger into the open wound, but could detect no evidence of fracture of bone.

I prescribed lotions of carbolized cold water, applied by soft linen cloths; administered ten grains of calomel, and to quiet him, left a mixture of morph. sulph. gr. $\frac{1}{6}$; chloral hydrat. gr. v., potass, brom. gr. x in each dose, to be given every two hours. When aroused he complained that his head and breast hurt.

Soon after I left the house he passed into a comatose state. At 4 p. m. he was seen by Dr. Holder. He was in a general convulsion, pupils contracted, pulse 52, full, strong and regular; soon ofter it rose to 56. Dr. N. C. Parrish and myself arrived at 5 p. m., found patient in dorsal decubitus, respiration stertorous, jaws slightly locked. He moved and groaned when wounds were examined. Bowels had not moved, so twenty grains of calomel were put upon his tongue and water given. He probably swallowed fifteen grains; had some difficulty in swallowing.

Before we left, the pulse had increased in frequency from 52 to 70, and was rather weak and irregular.

There being a difference of opinion in regard to operation, we concluded to call in Dr. Acheson, of Denison, who met Dr. Holder, Dr. Carey, of this place, and myself, at 10 a. m. Monday. Condition of patient unchanged since last seen. The wound of scalp, was enlarged toward the median line one inch. The skull was bared of periostenum, but no fissure of bone could be seen or felt. The bowels had responded several times during the night, and were still acting; dejections very offensive. In view of a possible malarial element, it was decided to administer quinia sulph. in eight grain doses in solution every four hours, and to postpone further operative procedures twenty-four hours longer.

Patient sank gradually and died about 4 p. m.

As there was understood to be a difference of opinion amongst the doctors as to the indications for an operation, one physician holding that trephining was clearly indicated and offered the only chance of life, in view of the futere legal procedures, a post-mortem was ordered and made by myself (Drs. Holder, Parrish and Carey being present) eighteen hours after death.

Considerable effusion of blood was found in the tissues of the scalp in the neighborhood of the wounds. Skull wall very thin, not averaging one-fourth of an inch in thickness, and at the anterior inferior angle of the parietal bone, it was about one-eighth of an inch thick.

Fracture of the parietal bone two inches above its lower border, extending backward two inches irregularly, then irregularly downward and forward to within a half inch of the anterior inferior angle of the parietal bone.

No depression of fractured portion; on the contrary, rather an inclination to be elevated.

Extravasation of blood, clotted, between the dura mater and skull, about the size of the palm of an ordinary man's hand, probably three-fourths of an inch in thickness, at base of skull opposite anterior inferior angle of parietal bone. From that point the clot extended to the posterior part of the orbit towards the top of the head, two or two and one-half inches, one and one-half inches anterior to the coronal suture, two and one-half inches posteriorly.

The head was above the average size, and the clot barely extended to beneath the wounds of scalp, in the opinion of three out of four of the physicians. This could have been definitely ascertained at the autopsy, but was not thought of at that time.

Of course the source of the coagulum was from a rupture of the arteria meningea media. There was no visible lesion of the brain substance.

Agnew says in his Surgery that when, in addition to the signs of compression, there is great restlessness with muscular disturbances and convulsions, the case is probably one of laceration of the brain substance. Also Mr. Hewitt says; The post-mortem records of St. George's Hospital show that within the last few years there have been twenty-five cases of extravasation of blood between the bone and dura mater, in all of which the brain was more or less extensively lacerated.

Surgical Aphorisms.

Dr. J. J. BERRY thus writes in the *New England Med. Mo.:* Surgical literature does not always supply the information most essential to the operator, neither is the skill or dexterity of the surgeon a guarantee of successful results.

To the minor details of surgical care, therefore, upon which I believe hinge the great progress and successes of the day, I desire to call attention. If the views expressed should savor of dogmatism, they may be pardoned as being the result only of well settled convictions.

Do not operate upon patients who are under novel conditions of locality, temperature, domestic life, etc. Sudden and well-marked variations of temperature and humidity have their definite and peculiar effects upon the course and termination of operative cases.

The secretions should be fully regulated prior to every operation, and should form an important portion of the after-treatment.

The administration of quinine seems to us to have a decided effect upon the intensity of surgical fever.

By chronic alcoholism shock is rendered more profound and persistent, suppuration more liable, secondary hæmorrhage more imminent, and internal complications more frequent.

The habitual use of opium has a very unfavorable effect upon the mortality of surgical cases.

To the method of Lister are we indebted for two things, namely, aseptic conditions and attention to details. In some other particulars it is objectionable, and cannot be considered as fully abreast of the times. In the large majority of cases the use of strong antiseptic solutions is reprehensible; the latter are decidedly irritating, and, by their action upon the tissues, exert an unfavorable influence upon the blood supply of a given part. The good effects attributed to them may in reality be due to irrigation rather than to germicidal properties. The free use of water, rendered sterile by previous boiling, will be found to meet most indications. We are persuaded that ordinarily there is no suppuration in deep wounds which are aseptic and under proper care, and moreover that it is only under certain conditions that germs are harmful.

It may be stated that in many cases drainage tubes of whatever variety are of doubtful utility. Those of small calibre are manifestly injurious, large sizes are a source of irritation, and delay healing in deeper portions of the wound. Although certain cases seem now to require them, recent advances indicate that in many varieties of wounds we shall soon dispense with all methods for securing drainage—in fact, there will be nothing to require it.

Immediate union is prevented and delayed by certain conditions of the tissues. The common practice of dissecting out tumors and the like, with the handle of the scalpel, should be pursued only when absolutely necessary. The result of such a procedure is disastrous to the vitality of the parts; minute blood-vessels are torn through and off, nerve filaments are bruised, and minute portions of tissue are deprived of their blood-supply and become necrotic. It is far better to include portions of healthy tissue in an exsected mass, than to economize in this particular and produce a lacerated wound. The same thing results when considerable portions of tissue are caught in the teeth of artery forceps and twisted,

or when a cautery iron is applied to a bleeding surface, or when strong styptics are applied to control hemorrhage.

For similar reasons, a wound should not be closed until the slightest oozing from its surface has been arrested. Not only does coagulated blood prevent coaptation, but unless rapidly absorbed is sure to invite suppuration. Every wound should therefore be packed with some aseptic absorbent material before being permanently closed. In fine, the opposing surfaces should be as free as possible from all sources of irritation of whatever nature.

Case of Perinephritic Abscess.

Dr. T. M. Woodson thus writes in the *Nashville Med. and Surg. Jour.* for February:

The following case presents some points of interest. The patient, a member of this Society, now present, was seen by several members, who kindly rendered valuable service, for which both patient and reporter are profoundly thankful.

L. M. W., aged twenty-one years, well-developed, six feet high, ordinary weight one hundred and forty pounds, had never been sick except an attack of measles eighteen months ago; had lately completed his medical studies and begun the practice of medicine. He was attacked May 23, 1885, with pain in left lumbar region, increased by motion, pressure, or deep inspirations, shooting down to left testicle, which was soon followed by fever, rigors, and profuse perspiration, anorexia, thirst, with constipation, urine normal in quality but diminished in quantity. These paroxysms or exacerbations came on daily from 4 to 6 p. m., until June 14, a period of three weeks. The highest rise of temperature noted during that time on several occasions was 105.5°, and pulse 100. There would occur each day an entire intermission during the forenoon, when temperature and pulse would be normal. Bowels were freely moved by cathartics, and patient thoroughly cinchonized. Thinking a malarial element the prime cause of the disturbance, more than one ounce sulph. quinine was used without the desired effect. The constant pain remaining in left lumbar region, with the concomitant symptoms above stated, directed attention to the probable presence of pus there or elsewhere, as the most probable cause. From the tenth rib, three inches from centre of vertebra down to two inches below the last rib on left, there was a marked tenderness on pressure, with an indistinct degree of fullness, or rather an undefined tumor, without discoloration or any external sign of inflammation other than stated. The hypodermic needle was entered at lower border of twelfth rib, three inches from center of spine, as a means of exploration, which drew off pus, deep-seated.

June 15—Present Drs. W. T. Allen and X. B. Haynie. An aspirating needle was introduced at the point above-named and three and one-half ounces of pus evacuated, which proved to be very thick and without odor. There followed an immediate decline of temperature and fall of pulse to normal, with corresponding amelioration of all unfavorable symptoms, until June 20, when there was a return of the same, as violent as before. On that date Drs. Allen, Haynie, J. B. Hanna, and E. S. Carr were present. The aspirator was again used at the same place, only drawing off, one ounce of pus. Loss of strength, emaciation, want of appetite, with great pain in the left side, had already made serious inroads upon his consti-

tution and system, demanding liberal use of anodynes, which were given hypodermically in doses of ¼ gr. sulph. morphia, with 1–100 gr. sulph. atropine every six hours.

June 21.—Prof. W. T. Briggs, Nashville, Tenn., was requested to see the case and promptly responded, and on careful examination concurred in the diagnosis of perinephritic abscess of left kidney, advising the treatment continued, viz., relying on aspirator to evacuate the pus for a longer time; but if this was not followed soon by permanent improvement, or the case should linger, to make a free incision into the abscess, wash out the cavity with antiseptics, and use drainage tube.

June 22.—Present Drs. H. A. Schell, A. J. Swaney, R. T. Bush, W. T. Allen, and Haynie. The aspirator was introduced one inch lower down, and on a line from first introduction, which failed to remove pus or anything else. It was considered by all present that the sac was entirely emptied.

June 28.—To this date from the 22d had been better, until the afternoon, when he grew suddenly nauseated and vomited large quantities of deep-colored green fluid, greatly in excess of fluids drank. The stomach rejected every thing —food, drink, and medicine. This continued unabated several days, followed by extreme prostration and failure of vital power. The remedies used or not used to meet this extreme and critical condition it is needless to enumerate; suffice to say that the usual routine was diligently brought to bear. Without being certain as to specify the most valuable remedy, we would mention peptonized milk with lime water and enemas of tr. opium as perhaps the most efficient. On the cessation of vomiting there was again an amelioration in all the symptoms, with slight improvement until July 17. Suddenly a rigor, followed by temperature 102°, profuse prespiration and renewal of pain in left side, announced again the presence of pus in the old site, which was verified by hypodermic needle. Fearing delay and continuation of these symptoms in his already reduced condition would prove more than he could bear, it was decided by all present best, if not offering the only chance, to make a free opening.

Drs. Schell and Allen present, July 18, 10:30 a. m. Gave ¼ gr. morphia hypo dermic, followed in forty minutes by hypodermic injection of 4 grs. of cocaine solution in line of proposed incision, which was made obliquely two inches long and two and a half inches below the point where aspirator had been used, also three inches from center of spine, into the sac of abscess more than an inch deep, evacuating four ounces of pus, same character as before. The solution of cocaine rendered the knife almost painless. The cavity was washed daily with solution corrosive sublimate 1 to 2,000; introduced drainage tube, which entered obliquely upward toward the spine more than three inches; applied absorbent cotton and bandage. From that date there was rapid and permanent improvement in every respect, locally and constitutionally, especially an immediate subsidence of rigors, high temperatpre, and perspiration, with the left side pain. The drainage tube and antiseptic washing was continued until August 30, when it discontinued and wound healed.

Remarks.—The mistake in the treatment of this case cannot be overlooked; it is too plain, the sequel proves, viz.: On the 15th of June, thirty-three days before the free incision was made, when pus was first discovered, instead of re-

sorting to and relying on the aspirator to evacuate the sac, the treatment last resorted to and adopted would have saved valuable time without the great risk and hazard to which the patient was exposed, barely escaping with his life. The error was shared by all the physicians who saw the case, no one having observed a similar case except Dr. Briggs, who advised the free opening, but at the time of his visit thought it safe to defer longer. I cannot now, with the experience of this case and the concurrence of all the physicians who were associated, *too strongly* urge the importance of an early free outlet to the pus as soon as discovered, with drainage and antiseptic washes, in similar cases. This mode of treatment is the crowning triumph of modern surgery. Doubtless many obscure cases of abscess of the lumbar region, under various names, have perished that otherwise could have been saved by this treatment early adopted.

Complete Amputation of Male Genitals for Recurrent Epithelioma.

Dr. ROBERT JONES thus writes in the *Lancet:* S. K——,* of good family history, aged twenty-nine years, came to me in April, 1885, suffering from a hardened condition of the end of his penis. There was a small superficial ulcer, which gave rise to very little pain and discharged a small quantity of thin pus. He denied emphatically ever having placed himself in the way of syphilis, and stated that the hardness of the penis had more or less obtained for three months, the ulcer for a fortnight or three weeks. The glands of the groin were enlarged and hardened, and erections of the penis, which were very frequent, were also very painful. Being in some doubt in regard to malignancy, I placed the patient under a mercurial course, and watched the progress of the ulcer. For upwards of three weeks it underwent no perceptible change; its edges were not ragged; there was but little pain; no tendency to bleed or excavate. The edges were barely raised above the surface, the base even, and no eversion of the borders. In fact, it presented no marked features of epithelioma. The induration, however, rapidly increased, until half the penis was of a characteristic leaden consistence. The diagnosis, which was no longer doubtful, was shared by Mr. Rushton Parker and Mr. O. Thomas, and the penis amputated early in May, just in front of the pubes. The patient was at his work in a fortnight, the enlarged inguinal glands having meanwhile subsided. For over seven months the patient was completely rid of the disease, but at the end of the year he complained of soreness at the end of the stump. He came to me in January, when I found the disease had returned at the site of amputation, which was occupied by a tumor, painful on pressure, and freely discharging pus through the urethra. The inguinal glands had again become enlarged, and difficulty was experienced in micturition. The scrotum in the neighborhood of the urethra had become ulcerated, and the left spermatic cord was much enlarged and indurated about an inch from the inguinal canal. An operation being imperative, the patient was admitted into the Stanley Hospital towards the end of January, where, owing to the kindness of my colleague Mr. Sheldon, I was enabled to treat the patient.

On February 4th, having made an incision through the length of the raphé of the scrotum, I came down upon the corpus spongiosum, and slowly dissected it

* Shown at the Liverpool Medical Institute.

from the adherent corpora cavernosa. The cavernous bodies were next followed to their origin, and with a blunt scalpel the crura were separated from the pubic arch. The corpus spongosum was then divided, the posterior part being left of sufficient length to easily reach the perineal skin wound, the anterior part being included with the cancerous mass.* The left testicle was now removed, the involved cord being dissected high up and secured in the inguinal canal. The right testicle was next excised, together with most part of the scrotum, excepting a flap, into which I made a slit for the reception of the urethra and brought down like an apron over the perineum. The edges of this flap were stitched to surrounding structures, and the urethra made secure to the central opening. The wound was kept as fresh as possible, the patient placed upon light dietary, and an india-rubber catheter maintained in position. The temperature rose to 102° upon the second day, but was reduced, and he recovered, without any symptom of interest, in three weeks. In seven weeks he was able to work.

Several cases have been lately reported where the crura have been dissected from the rami after the manner first described by Mr. Pearce Gould. But I have only met with the reports of two cases where the dissection was as complete as that which I now report. One was a case described by Professor Annandale some years ago, where, if my memory does not fail me, he removed the penis and testes, but did not clear the pubic arch. The other is reported by Mr. Wheelhouse, of Leeds, where, if I understand his description, the organ was severed anteriorly to a ligature or switch placed around it in front of the triangular ligament, and he further advised that, should any of the remaining portion of the crura look suspicious, it had better be clipped away. In any case I think it would be well to remove the whole of the crura at once, on the same principle that it is wise to remove the whole and not merely a section of the breast for scirrhus; it adds but little to the complexity or danger of the operation, and may be the means of preventing a recurrence. The case I have reported is also interesting, inasmuch as the patient was only twenty-nine years old, and had never been the subject of phimosis. His inguinal glands at the time of operation were extremely hard, and I was sorely tempted to remove them. Indeed, in a few days after operation they felt so thoroughly malignant that I appointed a day for their excision. In a few days, however, the hardening quite disappeared. This accords with the observation of other surgeons. In my own practice I have had to deal with only four cases of epithelioma of the penis, in three of which I performed the ordinary flap amputation. In one case a recurrence occurred in the glands twelve months after operation. In the remaining three cases the stump was the seat of attack. In that where the glands became affected they were normal in every way at the time of the amputation, whereas in the other three instances they were enlarged at the time of the operation, but subsequently became healthy. Six months have now elapsed since the operation, and there is no sign of return. The patient is at work; has, of course, full bladder control, and suffers no manner of inconvenience except from a superabundance of skin, which is apt to become damp and irritable, but only to a very slight extent. The general conclu-

*In dissecting I made a small puncture in the tense corpus spongiosum, and experienced great difficulty in controlling the hæmorrhage, which only ceased by leaving a Spencer Wells forceps upon the gap for about twenty-four hours.

sions I have arrivedat with regard to future cases are: (*a*) When the diagnosis of epithelioma is beyond question, and the patient of a suitable age, the amputation should include the crura; (*b*) that the testes should, in the majority of cases, be removed; (*c*) that a scrotal flap should be saved as a covering for the perineum; (*d*) that there should be no hurry about excising enlarged inguinal glands; (*e*) the higher up the artificial penis can be brought, the more convenient to the patient, and the sooner it will unite to the surrounding tissues, as the discharges gravitate to the most dependent parts.

Further Experience of White Peat Powder as a Surgical Dressing.

Dr. ROBERT PARK thus writes in the *Practitioner* for April: I have made a much more extended use of this powder, alone and in combination, with very gratifying results.

Alone, it answered exceedingly well as a siccative in a case of acute eczema of both arms. When this became subacute the combination with vaseline and bismuth oleate was successful in allaying irritation and inducing a healing process more quickly than many other methods which I have tried. General treatment was, of course, not neglected.

In two cases of offensive perspiration of the feet and toes, one of the palms, and one of the perineum, it has also answered admirably alone, not only remedying the actual abnormality, but seemingly removing the tendency.

Several cases of old-standing psoriasis, one of lepra, one of acne rosacea, and one of eczema rimosum of the hands and lips, have all been much benefited where they have not been cured. The latter patient, a young lady with strong family predisposition, writes: "My hands are a great deal better with the use of the soap, and my mother's also are nearly well." In all the cases the powder was prescribed in form of an ointment with vaseline or a soap odorated by the eucalyptus extract of Sanders and Co., Australia.

In this connexion I may note in passing that Prof. Unna, of Hamburg, has been treating some forms of skin disease—acute especially—by means of powdered marble in soap. It is a curious coincidence, but I am satisfied the white peat is an infinitely superior agent for the object aimed at, viz., to remove morbid exudations or incrustations and stimulate a more healthy gland-action and epithelial growth.

It is in combination with iodoform, however, that I have obtained the most noteworthy results. My previous good results have been confirmed in nineteen cases of chancroid. Without exception it proved much superior to any of the dressings in common vogue.

Two cases of hard sore *solely* under its influence cicatrized previous to the eruption of the secondary rash. In a case of smegma præputialis it has answered better than any other application. The following case of erysipelas of the head is worth recording in some detail:

On October 25th, 1885, I was called to see J. B., æt. forty, cutler, residing in Bridge Street. He had been suffering from erysipelas of the face and head for six days. His head and face were now swollen so that his features were quite unrecognizable. The pinnæ were so swollen that they stuck straight out from

the sides of his head. Numerous vesicles studded the surface. His breathing was labored and rapid, and his lips and cheeks were flapped out and in during respiration. Pulse, 160; temperature, 108°. He was unconscious and delirious. I gave an unfavourable prognosis—in fact I considered the case a hopeless one. I however ordered the usual evaporating lotion of alcohol to be sedulously applied, and strong doses of Ferri Mur. Tinct. and Liq. Amm. Acet. in addition to a purge. Next day (26th) he was in much the same condition save that he was not so delirious, and he had spoken consciously. I also ascertained that his urine was free from albumen. I examined the scalp more particularly and found it was boggy in all over and suspiciously fluctuant at parts overthe vertex. I thought I would try the Pulv. Iodof. Comp. as a dressing instead of the alcohol, continuing the treatment otherwise.

27th.—To-day the patient is conscious and able to converse a little. He has also been able to take a little food. The powder has answered well in respect that it adheres and is agreeable. He likes it. The iodoform odor is very strong in the room, and is quite perceptible above the eucalyptus, the latter being more volatile and less persistent. I fancy the inhalation of the combined vapors may exert beneficial effects in addition to local benefit, which is quite apparent in the arrested and subsiding inflammation, the disappearance of vesicles, &c. The breathing is less labored, the pulse less frequent, and the temperature down to 102°.

28th.—Improvement more marked in all respects, but it is now obvious that a large abscess is maturing under the scalp. Poultices were therefore applied to the occiput and vertex with a view to localize as much as possible, the powder being continued elsewhere.

29th.—The swelling is gradually subsiding and desquamation is taking place freely. After three days the abscess was opened by incisions on either side, a drainage tube being passed through betwixt the two. The abscess had separated the scalp entirely from the parietal and upper part of occipital bones.

November 3d.—Powder still applied to face and neck where desquamation still proceeds. Features now recognizable though still much swollen. From this date onward convalescence was steady, and by the end of the year he was able to resume his employment.

This is the only case of recovery I have ever had from phlegmonous erysipelas of the head and face where the symptoms were so grave, and I naturally attribute some part of the good result to the dressing. The patient and his people fancy his recovery is entirely due thereto.

Several cases of severe bruises have been treated by simply incising the bullæ when necessary to allow the escape of effused blood or serum, and then applying some of the powder, covering with a layer of absorbent wool, and maintaining in place.

The results were certainly better than by the method of evaporating lotions, &c. An important consideration was, that only one dressing was required and in none of the cases had the patients to stop work. From an economical point of view this is an immense benefit.

In a severe sprain of the ankle simulating a Pott's fracture, the following procedure was adopted. Two suitable pieces of flannel were taken and sewn up the

centre. Between the folds a paste formed of the peat powder, milk of lime, and sodium silicate, was freely laid in, and the foot and ankle clad therewith. Thus was formed an extremely light splint which, when it set, exercised an equable pressure and gave the necessary support. The patient was well and at his work within four weeks.*

For ulcers of the lower extremities the dressing acts better than anything else, inasmuch as it immediately destroys fœtor, lessens discharge, stimulates the growth of healthy granulations, and promotes cicatrization.

As an illustrative case I take that of Mrs. C., Brown Street, æt. fifty-three. On December 3, 1885, I saw her in bed suffering great pain from six ulcers of the left lower leg. They had all the character of syphilitic ulcers in respect of odor, form, and pain. She had also the aspect of syphilitic cachexia; and her face and lips showed the lines and drawn appearance of a syphilitic patient. Under the dressing the pain was immediately relieved, the discharge was sensibly lessened after four days (the dressings were only changed once a day), and cicatrization was complete in fourteen days; the woman, meanwhile, having been able to go about her work. She, of course, had suitable medicine internally, and the leg was bandaged; but, allowing these their due share in the result, the same end could not have been so quickly attained by any other local dressing I know of.

The same good result ensued from the dressing of a strumous ulcer of the mucous membrane covering the ramus of the left lower jaw, which burrowed behind the last molar tooth; iodoform alone and several other applications had failed.

In the granular pharynx of chronic pharyngitis it has answered well, used by insufflation: and, in the same way, it has been found invaluable by me in chronic endocervicitis and ulceration of the os uteri. One or two dressings suffice to clean the os and cervix and leave healthy granulating surfaces. By "ulceration of the os" I mean the abrasions which result from irritation of leucorrhœal and other morbid discharges. But in a case of ectropion and vegetations or warty excrescences, I had an excellent result with very few dressings. After cleaning and drying and application of cautery I introduced three or four teaspoonfuls into the speculum, and with a small pad of dry absorbent cotton distributed it over the diseased surface and maintained it there. At the end of three days this was removed, and it was then found that the parts had a healthy appearance and reparative action had begun.

The Painless Production of Local Anæsthesia, and its Applicability in the Treatment of Certain Painful Nervous Affections.

Dr. J. Leonard Corning thus writes in the *N. Y. Med. Jour.*, November 9: The desire to produce a condition of local anæsthesia in a part, which has been

* Since writing the foregoing I have experimented with the powder in combination with starch and gypsum, and find that without weakening the strength of bandages made with these, they are greatly lightened. I therefore heartily recommend it for use in all cases where the ordinary starch bandage is required, and especially for Sayre's jackets. The proportions I have used are those of equal weights, and one of peat powder to two of the other.

rife among surgeons for many years, has finally been realized, as the copious literature of the last fifteen months abundantly demonstrates. With an eye to the evident applicability of local anæsthesia in the treatment of a variety of painful nervous conditions, the author of this paper has conducted and published the results of a large number of experiments showing the applicability of the principles of local anæsthesia to the fine ramifications of the sensory nerves in the integument, to the large nerve-trunks, and finally to the sensory tracts of the spinal cord itself. The practically universal expression of approval which these contributions have evoked from the profession in this country and abroad, has been a source of gratification no less than surprise to the author of this paper. Originally conducted with a view to a strictly neurological application, these researches * have been extensively applied to the useful ends of surgery. All this is gratifying. It is not my intention on the present occasion, however, to recapitulate what has now become a part of medical history; I propose rather to go forward. To come to the point, it is well known that local anæsthesia as heretofore practiced has been unavoidably associated with a certain degree of pain, owing to the necessity of introducing the anæsthetic into and below the skin by means of the hypodermic needle. In order to overcome this difficulty, an attempt has recently been made to introduce the anæsthetic into the skin by means of electricity. Thus, Wagner † moistened the anode with a five-per-cent. solution of cocaine and placed the cathode over an indifferent point, regarding the position of the latter as immaterial. After applying the galvanic current for four or five minutes, he affirms that he was able to produce anæsthesia on the flexor side of the upper arm. Similar experiments have also been conducted by others. As for myself, I have carefully repeated these experiments, but have been unable to obtain more than a superficial anæsthesia. Now, it is a well-known fact that if a membrane is placed between the poles of a battery, as above described, it is possible to cause a fluid to penetrate the same (from the anode to the cathode) by the action of the current. This is one of the well-known axioms of electro-physics. But to conclude from this that it is possible, without the introduction of some favorable circumstance, to induce a fluid to penetrate in this manner a structure (the skin) a hundred-fold more dense than the ordinary membrane found in the physical laboratory, seems, to say the least, highly improbable. These considerations, coupled with my own failure to reproduce phenomena of the same intensity as those described by Wagner, aroused in me the conviction that success was alone to be found in some

Method of Increasing the Porosity of the Skin.—After much reflection, I bethought myself of the following method: I procured an implement resembling the well-known instrument of Baunscheidt, but provided with many more fine needles than the conventional instrument of the shops (Fig. 1). As in the Baun-

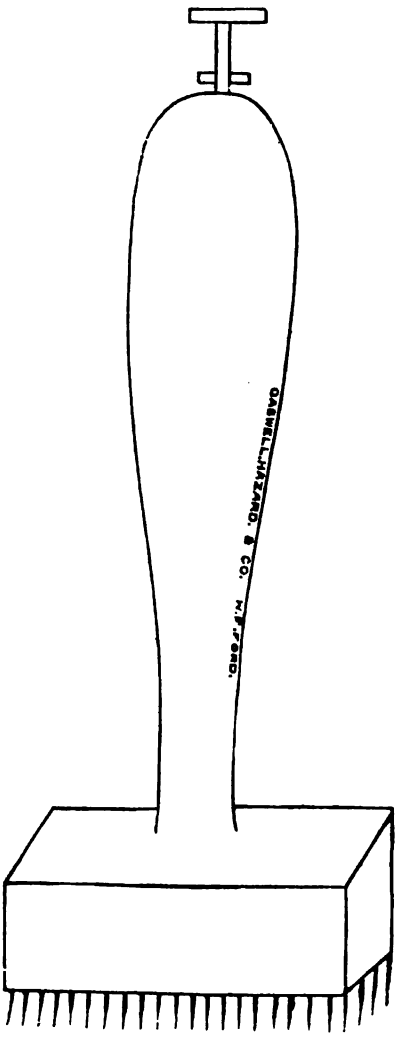
* "On the Prolongation of the Anæsthetic Effects of the Hydrochlorate of Cocaine when subcutaneously injected: an Experimental Study," by J. Leonard Corning, *New York Medical Journal*, September 19, 1885. "Prolonged Local Anæsthetization by Incarceration," *ibid*, January 2, 1886. "Spinal Anæsthesia and Local Medication of the Cord," *ibid*., October 31, 1885. "Local Anæsthesia," New York, D. Appleton & Co., 1886.

† "Wien. Med. Blätter," No. 6, 1886.

scheidt arrangement, this instrument is so constructed that by releasing a spring it is possible to thrust all the needles (about one hundred and fifty in number) into or through the integument, and, what is of paramount importance, *such perforation* is accomplished absolutely without pain. Now as to the method:

1. I first exsanguinate the part to be anæsthetized with an Esmarch bandage

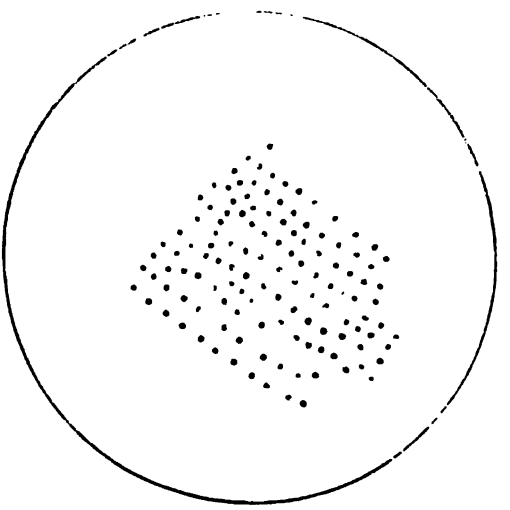
FIG. 1.



I now apply a tourniquet above the bandage, and the latter is then removed. It is clear, therefore, that the whole district situated below the tourniquet, and which includes the territory which it is desired shall be rendered anæsthetic, is bloodless. Now, by means of the implement above described, I perforate the skin thoroughly throughout the entire zone which I desire to render anæsthetic. *This is accomplished without the slightest pain*, as already intimated. Owing to

the exsanguinated condition of the part, these minute openings remain open somewhat as in a dead person. The sieve-like appearance of the skin as seen through a powerful lens is well shown in Fig. 2. An oblong sponge electrode saturated with a two-and-a-half-per-cent. solution is now secured over the preforated portion of the integument by means of an elastic strap. This electrode is connected with the positive pole of a galvanic battery, while the cathode is placed opposite the same (on the other side of the limb) or over some indifferent point. If, now, the plates of the battery are immersed and the current is grad-

Fig. 2.



ually increased until there is a slight but well-marked sensation of warmth, the anæsthetic begins to exert its influence at once, so that in the course of from two to four minutes there is produced a condition of anæsthesia which enables one to thrust needles into the part to considerable depths without provoking pain. It is evident that where such a condition of things prevails in the integument the structures lying beneath may be readily anæsthetized, if one so desires, to any extent and *without pain*, by the use of the hypodermic syringe, or by thrusting the needles a second time, still deeper.

I have employed this method recently to allay the hyperæsthesia which is such a troublesome feature of spinal irritation. I fancy, too, that it might render good service in certain obstinate conditions of tic douloureux, and I shall certainly try it in this and similar painful affections at the earliest convenient occasion.

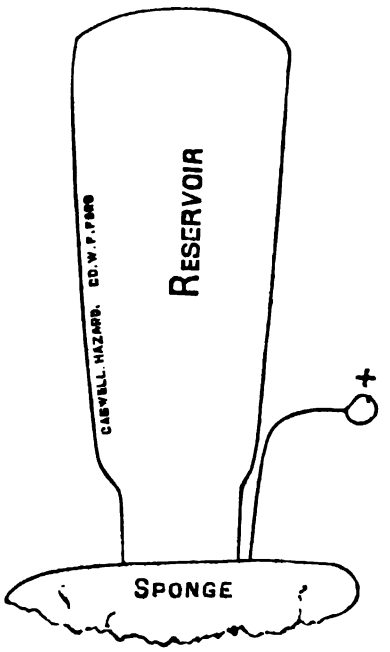
Any one at all conversant with recent developments in neuro-therapeutics will perceive that this method offers possibilities of practical advancement.

2. I would add that I have induced painless perforation and anæsthetization by means of the galvanism without previous exsanguination, and have found the results in all respects gratifying.

3. The third mode of inducing cutaneous anæsthesia by means of the electric current combined with painless multiple puncture of the skin and the use of co-

caine, which I have found very successful, is as follows: (*a*) Perforate the skin, or at least the epidermis, with the instrument already described. (*b*) Place a bandage around the part, above the point of puncture, and draw the same sufficiently tight to interrupt the venous circulation, but not to such an extent as to interfer with the arterial circulation. This procedure will cause the blood to well up through the minute openings previously made in the skin. Now apply the positive electrode, saturated with a two or three per cent. solution of cocaine, over the perforated portion of the skin. The position of the cathode is immaterial. As before mentioned, the current should be strong enough to produce a feeling

FIG. 3.



of warmth. After from two to five minutes the electrodes may be removed, and the skin beneath the positive electrode will be found to be completely anæsthetic. Where it is desirable to prolong the duration of the anæsthesia considerably, the part may now be exsanguinated and the tourniquet applied above the anæsthetic zone, so as to completely interrupt the circulation in veins and arteries alike.

The superiority of this method consists, of course, in its absolute painlessness; whether it will find a place in surgical operations or not remains for those who are interested in such matters to decide.

I would merely add that I have had constructed for me a reservoir electrode (Fig 3), which retains the anæsthetic, thus avoiding the necessity of removing the electrode from the part in order to moisten the sponge.

The Value of Exploratory Operations.

In the *Lancet*, November 1886, pp. 909 and 962, Mr. THOMAS BRYANT gives an address on the exploratory operations in the practice of surgery. These opera-

tions are of value for *diagnostic* as well as for *curative* purposes. To cut into a growth the nature of which can only be told with certainty after an incision into its substance, and which, if of a cancerous kind, cannot be too early removed, is a scientific, conservative and sound proceeding. To apply this practice to tumors of the mamma is most essential, and it has saved many a breast. In diseases of the testicle is is hardly necessary to point out the wisdom of a like practice. Many cases of hæmatocele have been mistaken for malignant affections, and have been removed unnecessarily. In diseases of the joints it would be well if the operation of excision were, as a rule of practice, preceded by an exploratory incision. If this were done, it would be frequently found that no excision would be required, but by making a free vent for discharge, or by removing a piece of necrosed bone, the joint might be left to itself and a better result obtained than would have been produced by excision. In abdominal, renal, vesical and pelvic surgery, the value of exploratory operations is best shown. Suppose a surgeon is called to see a patient with every symptom of acute strangulation of the intestine, while there is no external evidence to verify the diagnosis. Is he to wait for symptoms to turn up, or to set about an exploratory abdominal incicision at once? The author decidedly considers that an incision should be made, and that the case should not be left for the effect of drugs to be watched, or for further symptoms to show themselves. By making an incision, one will find out the cause of the strangulation; perhaps a band is present; or there is an internal hernia; or a volvulus; or an intussusception. Again, should an acute peritonitis be present, and its cause obscure; should one deep-seated abdominal or pelvic suppuration exist, and its true position be only guessed at, then an exploratory operation is the best thing that can be done for the patient. Several cases are mentioned, but the following will illustrate how important it is to perform an operation in these obscure cases. A girl, aged 11 years, was suddenly taken ill in November, 1884, with high fever, furred tongue, and intense pain in the right iliac fossa. She was attended by Dr. Hubbard, and recovered sufficiently to get up and run about, but similar attacks occurred during the next nine months. In October, 1885, another attack occurred, associated with pain and tenderness, more in the right lumbar than the iliac region. When Mr. Bryant saw the patient on October 17, he was certain that there was deep-seated pus somewhere, and decided to operate. Next day an incision, above and behind the crest of the right ilium, evacuated two or three ounces of fœtid pus, and with it came a puff of wind. The abscess was supposed to have some connection with the cœcum; the opening was enlarged downwards in front of the anterior iliac spine so that the cavity could be washed out with iodine water and a drainage-tube put in. After this the fever abated, but the abscess would not heal. Some two months later Mr. Bryant was probing the wound and thought he felt a hard body. On January 26, 1886, a hardened orange pip passed from the sinus, and in three weeks the child was well. In cases of *chronic* obstruction medical treatment should have the first place, so long as no local cause can be made out by rectal examination; but when a stricture is detected, the line of treatment is to operate. Many cases, however, are met with in which every symptom of mechanical obstruction is present, but because digital examination of the rectum fails to find the exact seat of the obstruction, the operation of colotomy is put off, and

then usually the case ends rapidly from a perforation taking place. It is in these cases that Mr. Bryant strongly condemns the practice of waiting, and insists on an exploratory incision into the right or left lumbar region, according to circumstances, to give the patient relief by a colotomy, when minor measures have been tried without relief. The author here describes a marked improvement in the operation of colotomy, by a method he has adopted in quite twelve cases during the last two years. It is only applicable where there is no great urgency for the operation. Having divided the abdominal parietes, with the oblique incision, and exposed and caught the bowel, a knuckle of intestine is brought out by a careful loosening process, and fixed *in situ* with two long hare-lip pins with flat heads, introduced through the integument forming the upper lip of the wound. The ends of the pins are covered with cork; even if the intestine be full of fæces or flatus, nothing escapes where the pins are passed. The whole wound is then washed with iodine water, and plenty of iodoform (one part) and boric acid (three parts), finely powdered, is thrown in with a puff-ball. The wound is now stitched up in front and behind the projecting bowel, leaving an opening for drainage at the posterior angle, into which a strip of iodoform gauze is inserted if the patent is thin, but if fat a drainage-tube is used. The whole wound is then covered up with iodoform gauze dipped into a mixture of terebene (one part) and olive-oil (three parts), a good sheet of Gamgee tissue and a bandage fixing the whole together. On the third, fourth, or fifth day, when the bowel has become perfectly adherent to the outside parts, the pins are removed and the bowel laid open. If the soft parts about the penis ulcerate, these should be taken out sometimes as early as on the second day; but, even if this is necessary, it will be found that sufficient adhesions have formed to prevent the bowel from falling back. The author considers the operation of enterotomy applicable to cases of strangulation in which the risk of laparotomy is rejected as being too hazardous, or where, on account of the age of the patient, any severe measure must be set aside; to cases of abdominal obstruction in which the clinical evidence points to obstruction high up in the colon, or low down in the small intestine; to cases in which laparotomy is inapplicable and colotomy is out of court; to cases of obstruction in which relief is urgently required, and a more exact method of giving it is not clear, either from some difficulty of diagnosis or some other cause. It is an operation which often gets a patient as well as the surgeon out of a perplexity, and is not difficult. Exploratory operations in cases of suppuration of the kidney, in cases of suspected renal calculus, or in examples of growth in or about the kidney, are of somewhat modern origin, and have been crowned with great success. In cases of suppurating kidney the author states he has not yet been tempted to excise that organ, and believes it is only necessary in very exceptional cases. The lecture concludes with a few remarks on operations on the cranium and its contents. Recent observations have proved that in *exceptional* cases a diagnosis of a tumor can be made with sufficient accuracy to justify a surgeon in cutting down upon and trephining a skull in search of a tumor with a view to its removal; but it has not been proved that these operations can be performed without great risk, nor can considerable portions of brain be removed without injury. In the Guy's Hospital Reports for 1886, Dr. Hale White has published an analysis of 100 cases of cerebral tumor with reference to operative treatment, cause,

mode of death, and general symptoms; it would be well for every surgeon to carefully study this analysis, to give ballast to any judgment which might otherwise possibly be over-stimulated by the brilliant successes lately achieved by Professor Victor Horsley.

Tonsillar Calculi.

In a memoir on the mischief caused by calculi of the tonsil (*Archives Générales de Médecine*, August, 1886), Professor TERRILLON gives the following clinical table of the troublesome symptoms that may be caused by the presence of calculi in the tonsils: relapsing angina, occurring at intervals more or less prolonged under the influence of uncertain or simple causes, accompanied by more or less marked œdema of the tonsillar region and surrounding parts, and terminating after the opening of an abscess and the discharge of some pus, or of concretions of variable consistence. To these symptoms may be added others that can be made out by direct examination, as, for instance, swelling, lividity, and induration of the glands, the existence on its inner surface of a whitish prominence surrounded by ulceration, which is due to the presence of a calculus. In cases of frequently-repeated tonsillar suppuration in subjects who have passed beyond the period of childhood, the surgeon should be led to suspect the presence of a calculus, and should direct his examination in order to clear up this point. With regard to differential diagnosis, Terrillon states that the swollen and indurated tonsil may present all the appearances of scirrhous swelling, and, in a subject of advanced age, be regarded as the seat of malignant disease. The calculi, when exposed on the surface of the tonsil, may be readily recognized by their characteristic hardness and whitish aspect; but, when embedded in the gland, cannot be made out except by very careful digital examination, and intense illumination of all the open cavities of the affected organ. The prognosis of calculous tonsillitis is not free from a certain gravity, as in some cases œdema of the neighboring parts may give rise to disturbing symptoms of dyspnœa. In cases of small, soft, and caseous concretions, the treatment should be directed simply to the relief of the associated inflammatory symptoms, as foreign bodies of this nature generally disappear together with the signs of the tonsillitis by which they have been produced. Hard concretions and true calculi ought to be removed, for, so long as they are allowed to remain, the patient will be subject to repeated attacks of angina. If the calculus be small and superficial, and projects into the mouth, it may be readily removed by means of a curette or of some pointed instrument. If the foreign body be large and deeply imbedded in the gland, or be surrounded and almost entirely concealed by fungous granulations, it will be necessary to make one or several small incisions into the margins of the enclosing cavity in order to open up a passage for the calculus, and to facilitate its extrusion.

Reduction of Incarcerated Scrotal Hernia by Means of Elastic Bandage.

In the *Vratch*, No. 35, 1886, p. 630, Dr. D. P. NIKOLSKY, of Krasnoufimsk, relates the case of a strong, muscular ironworker, aged 65, with a right inguinal rupture of twenty years' standing, which suddenly became incarcerated, and

could not be reduced either by ordinary taxis, or by ether irrigations after Finkelstein's method, or by manipulations after warm baths. The man suffered greatly from pain and sickness. The author, who had been called to the patient about thirty hours after the strangulation, tried again taxis, as well as electrization for half an hour, but did not succeed in making any impression on the swelling, which was as large as an infant's head. Before resorting to herniotomy, he resolved to give a trial to elastic bandage. The latter caused local pain, which circumstance induced the patient to remove the bandage in an hour or so. About ten minutes later, however, hernia disappeared spontaneously. [Five similar successful cases, communicated by Dr. Egoroff, may be found in the *London Medical Record*, October, 1884, p. 431. In the *Vratch*, No. 44, 1884, p. 741, Dr. M. P. Jakovleff, of Professor N. V. Sklifosovsky's clinic in Moscow, contributes six cases of incarcerated oblique inguinal hernia (four seen by him in the clinic, one from Dr. D. A. Bryzgaloff's practice, and one from Dr. N. N. Znamensky's), in which, after taxis had failed, an elastic bandage was applied after Maisonneuve's method. In five, the tumor was reduced in ten or twelve hours. In the remaining case the bandage failed to bring any relief, and herniotomy was ultimately performed. Discussing the use of Maisonneuve's method, Dr. Jakovleff comes to the conclusion that it is contra-indicated in cases—(1) where local and general symptoms point to gangrene of incarcerated intestine; (2) where the patient's urine contains considerable amounts of albumen; (3) in cases of incarcerated 'interstitial' inguinal hernia of Tillaux; and (4) in cases where elastic bandage gives rise to intense pain. Speaking generally, the longer incarceration has existed, the less successful results may be expected from the use of the bandage under consideration. At all events, when a ten hours' application of the bandage has failed to bring any improvement, reduction may be effected only by herniotomy.—*Rep.*]

Re-union of Cut-off Toes and Fingers.

Dr. N. Ilinsky furnishes details (*Vratch*, No, 29, 1886, p. 538) of two cases of the kind. A boy, aged 10, hacked off the second phalanx of his left great toe, the part remaining connected only by means of a thin bridge of the plantar skin. The patient being seen three hours later, the author disinfected the wound, sewed it with three sutures, and applied an antiseptic dressing. Complete union, with restoration of sensibility and fairly free movements, took place in thirteen days. Another patient, a tanner, aged 45, cut off the nail-phalanx of his left forefinger, the part being connected only by means of a very dirty and rough strip of palmar epidermis. The patient powdered his wound with soot, and came to the author about five hours after the accident. The injury was treated as in the former case. On the third day after suturing the man managed to hurt his injured forefinger, and even to dislocate the hewn-off part. The latter was again restored to its place. Two weeks later it was found thoroughly united.

QUARTERLY COMPENDIUM

OF

MEDICAL SCIENCE:

A

SYNOPSIS

OF

THE AMERICAN AND FOREIGN LITERATURE OF MEDICINE, SURGERY AND COLLATERAL SCIENCES.

EDITED BY

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AND

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I. ANATOMY, PHYSIOLOGY AND PATHOLOGY.

Meckel's Diverticulum.

Before the Midland Medical Society, Mr. A. F. CLAY showed a specimen of Meckel's diverticulum from a girl aged thirteen. She had swallowed a number of plum stones, and for the removal of these had taken strong purgatives. When first seen by Mr. CLAY, ten days after swallowing the stones, she was suffering from peritonitis and obstruction. He opened the abdomen in the middle line, and found a quantity of purulent fluid in the peritoneum, the intestines being matted together. The peritoneum was washed out, and a distended piece of intestine opened and stitched to the wound. The patient died from exhaustion thirty-six hours after the operation. At the post-mortem examination a Meckel's diverticulum was found with its ligament attached to the mesentery; a piece of the ileum below this had got under the loop, and was firmly strangulated, ulceration and perforation having taken place.

Serous Cysts of the Orbit.

At the meeting of the Académie de Médecine on December 14, M. PANAS read a communication on "The Pathogenesis of so-called Serous Cysts of the Orbit," *Bulletin de l'Académie de Médecine*, No. 50, 1886. The greatest obscurity has hitherto attached to the nature and pathological signification of these cysts. After a careful consideration of the subject M. PANAS draws the following conclusions.

1. These cysts, without exception, are of congenital origin, even when their presence is not manifested until an advanced age.

2. They present seats of election, corresponding with the bronchial clefts of the embryo.

3. Their contents (epithelium, hairs, teeth, solid or liquid fat) may vary without the dermoid origin being doubtful, and this is due to the histological constitution of their walls.

M. PANAS gives the record of an interesting case, with a full histological account of the cyst.

The Digestion of Milk.

M. REICHMANN, of Warsaw, has recently made several experiments on the digestion of the milk in the human stomach. The subject was a young man, aged 22, in robust health. The experiments were made by means of the stomach-pump, with unboiled, as well as alkaline and boiled, milk. The results were as follows: 300 cubic centimètres of unboiled milk are evacuated by a healthy stomach four hours from the time it has been taken, although the regular digestion is

completed three hours afterwards. Coagulation of the milk takes place about five minutes after digestion, and does not depend on increase in the quantity of acid, but on another agency, possibly the fermentation of rennet. During the digestion of 300 cubic centimètres of milk, the contents of the stomach show the greatest average degree of acidity (32 centimètres per cent.), at the end of an hour and a half. This acidity is owing, when digestion begins, to the presence of lactic and hydrochloric acid; the latter only appears three quarters of an hour after the ingestion of milk. Half an hour after taking the milk, the quantity of peptones is increased, and remains so for an hour and a half, after which time it becomes perceptibly less. Boiled milk (heated as from 16° to 26° C.), was taken into the stomach; 300 cubic centimètres were digested in two hours and a half; the acid contents of the stomach disappeared in three hours. After the ingestion of boiled milk, peptonization which, in that case is more energetic, begins sooner, and the clots and caseine are not so thick as when unboiled milk is given. Experiments with alkalized milk have shown that alkalization of milk prevents the peptonizing action of gastric juice. One hundred cubic centimètres of milk, alkalized by means of bicarbonate of soda, leaves the stomach entirely at the end of two hours. Alkalization does not prevent milk in the stomach from coagulating under the influence of rennet. In conclusion M. Reichmann says that the result of all his experiments on one person entirely coincided with nine previous experiments he had made.

Supernumerary Vertebræ and Half-Vertebræ.

In this lecture an attempt was made by Dr. SUTTON (*Brit. Med. Jour.*) to explain certain malformations of the spinal column, especially the occurrence of half-vertebræ and supernumerary vertebræ, as being due to the full development of mesoblastic somites, which in the ordinary course became suppressed. The type of the process was taken from the green turtle. Professor Kitchen Parker had found that, in the early stages of this chelonian, the vertebral column had fifty-one somatones, but the adult only forty-one. Careful comparison of the stages showed that seven segments aborted in the neck, and three in the caudal series. This suggested an ancestry from forms with a much longer tail, and neck not unlike a plesiosaur. That similar suppression occurred in mammalia and man was exceedingly probable, for supernumerary vertebræ were by no means infrequent in the various regions of the spine; besides, the disposition of the cervical nerves indicated that within approximately recent periods one element at least had undergone suppression in that section of the column.

With regard to half-vertebræ, quite a number of cases had been placed on record in which one-half of a vertebral centrum, with its transverse process, lamina, and spine had been wanting. On the other hand, instances of one, two, three, and even four, half-vertebræ too many, had been described. Examples of human fœtuses with tails had been recorded by competent observers, and in these cases the tail was composed of notochord, surrounded with muscular tissue. The only satisfactory manner of explaining such cases was to believe that, in the embryo, more mesoblastic somites were formed than were utilized in the formation of the permanent vertebræ; but, in some instances, the somites normally suppressed went on to full development. Occasionally, however, the

suppression exceeded its usual limits, and a diminution in the vertebral segments resulted. Reference was made to Cope's observation on the skeleton of *Eryops megalocephala*, an extinct batrachian exhumed from the Permian formation of Texas. In this animal, each vertebral body was normally composed of two lateral pieces. This discovery seemed to show that, in the bilateral nuclei composing the odontoid process of the mammalian axis, we had an example of the retention of a very primitive character.

The Propagation of Cardiac Murmurs to the Epigastric Area.

In 1881 Professor Federici showed with what ease and how definitely the area of the stomach could be mapped out by ascertaining by means of auscultation with the stethoscope the extent to which the sounds of the heart are audible in the epigastrium. Over the stomach both sounds can be clearly heard; over the colon, only the second. By percussion it is frequently difficult to distinguish a stomach note from one given by a distended colon. The propagation of the cardiac sounds gives a ready and reliable means of differentiation. Auscultation of the epigastrium may also be used as a means of separating cardiac murmurs. It is sometimes not easy to distinguish between an aortic diastolic murmur propagated to the apex and a post-diastolic or a pre-systolic murmur, both of which latter are produced at the mitral orifice. It is found, however, that murmurs produced at the aortic orifice are not propagated to the stomach area, whereas mitral murmurs are clearly audible over the stomach. Vanni has recently (*Lo Sperimentale*) confirmed these statements by clinical observations and post-mortem investigations.

II. PHYSICS, BOTANY, CHEMISTRY, AND TOXICOLOGY.

Nitrite of Amyl in Opium Poisoning.

It is reported (*L'Union Médicale*) that a case of opium narcosis was relieved by nitrite of amyl after belladonna had failed and the patient was almost beyond help.

Case of Iodoform Poisoning.

Edith S., æt. 15, a patient in the Lock Ward of the Sheffield Union (*Med. Press*), in a fit of remorse on October 12, 1885, swallowed four drams of iodoform mixed up in water. It was not discovered for two hours.

Symptoms.—Coldness and pallor of skin, trembling, with feeble and unaccountable pulse. No pain or vomiting. These were probably due to fright and cold.

Treatment.—Stomach pump until iodoform ceased to come up, then glycerine and milk, etc. The iodoform was not dissolved at all, coming up in flakes.

Blue Bread.

In portions of France and Germany, bread made from certain flours sometimes becomes blue, and under such circumstances, produces when eaten slightly toxic effects. In the *Sanitaire de Bordeaux*, Dr. LEHMANN says that this coloration is due to the presence of rhinanthocyanin, a blue coloring matter derived from rhinanthin, a glucoside of the rhinanthaceæ (rhinanthus and melampyrum especially). This coloring matter is sometimes green, and when dissolved in chloroform seems to be closely allied to indigo. This resemblance is only apparent, however, as the two substances are totally different. The author says that the blue coloration of bread indicates, therefore, that it has been made of flour from wheat (or other grain) not thoroughly cleansed from the seeds of some of the members of the rhinanthus family, and while no instances of grave intoxication following its use have been recorded, it is best that it be rejected as human food.

Iodoform Poisoning.

Dr. CUTLER, in the *Boston Med. and Surg. Journ.*, gives seventy-seven reported cases of poisoning consequent upon the use of iodoform in the treatment of wounds. The general symptoms were those of poisoning by iodine, namely, persistent taste and smell of the drug, impairing appetite and digestion, headache, sleeplessness and delirium, the latter usually of a melancholy character, in extreme cases passing into absolute apathy with involuntary dejections, rapid feeble pulse, and progressive marasmus. Dr. CUTLER arrives at the conclusion

that (1) Fresh wounds, or unhealthy or tuberculous surfaces, are the only cases fitted for the application of iodoform; (2) Only a thin layer or small amount of iodoform should be applied; (3) When granulations appear, healthy iodoform should be omitted; and (4) at the first symptoms of poisoning, or even coincidently with the first use of iodoform, compounds of alkalies with organic acids, such as potassium acetate, should be given by the mouth at frequent intervals. If severe symptoms supervene, transfusion with a solution of common salt is recommended, and the wound, after being washed free from iodoform with pure water and a solution of an alkaline carbonate, should be dusted with magnesia.

Case of Cocaine Poisoning.

On November 9, 1886, A. B. (*Med. Press*) took two drams of a four per cent. solution of cocaine by mistake, equivalent to four four-fifth gr. of cocaine hydrochlorate. Twenty minutes after, the patient was seized with cramp in stomach and nausea, throbbing of head, loss of eyesight, and use of legs, incoherence of speech, and confusion of ideas, but no unconsciousness. These symptoms were followed by severe sweating and prostration, with retching and vomiting of mucus, intermittent pulse (one in five beats) accompanied by cyanosis and feeling of suffocation. Next he had cramps in legs and feet, and tingling and numbness in hands. The vomiting and cramps lasted three and a half hours, but drowsiness and great prostration continued two hours longer, after which he gradually improved. The next day there was still weakness and vomiting, and a dry leathery feeling in mouth with loss of taste, also loss of power in legs and tingling and numbness of fingers; these symptoms lasted for three days, but the patient could not write a letter until the sixth day after taking the cocaine, as he could not feel the pen between his fingers.

Treatment.—Emetics at first with sinapisms over heart and stomach, afterwards warmth and stimulants, principally sp. ammon. co. etc.

The Use of Fresh Milk in the Treatment of Acute Arsenical Poisoning.

Dr. Joseph Jones reports in the *Virginia Medical Monthly* for October, 1886, the notes of three cases of acute arsenical poisoning in which fresh milk given in large quantities proved of great value. The first of these cases consisted of an entire family—father, mother, four children, and a young woman—who were poisoned by arsenious acid thrown into a pot of soup. In these cases the excitation of vomiting and the use of large and repeated doses of fresh milk, followed by rest and milk and lime water, resulted in the recovery of the seven individuals. In the second case, Dr. Jones was summoned to see a family, of whom he found the father lying dead on the floor of the front parlor, while the wife, son, and four servants were suffering from violent vomiting and cramps. Investigation showed that white arsenic, which had been purchased to destroy vermin and rats, had been used by accident instead of white sugar in the preparation of pastry. The free use of fresh milk and milk and lime-water resulted in the recovery of the remaining victims. A third series consisted of a family who had been poisoned by arsenious acid ground up with the coffee. Here also Dr. Jones administered large quantities of fresh milk, followed by ipecac and warm water. Pro-

fuse and repeated vomiting was thus excited, and the stomach was thus washed out with effusions of ipecac and warm milk. As soon as the nausea had ceased the bowels were opened with castor oil. Here also all the patients recovered. Dr. Jones thinks that the milk acts by diluting the poison, enclosing it in its coagula, sheathing the inflamed surface of the mucous membrane, and when the system is capable of absorption and digestion, acting as an aliment of the greatest value.

Capsicum in Opium Poisoning.

Dr. JAS. G. KIERNAN thus writes in the *Medical Standard:* Capsicum has not been too strongly praised by Dr. J. V. Shoemaker when he says: "It is one of the most important remedies in the materia medica. It has no superior as a safe and effective general stimulant. It increases the secretion of the salivary glands, promotes the formation of gastric juice, and increases the secretion of the intestinal glandular system. It accelerates the heart's action, increases arterial tension, and produces a feeling of warmth and well-being throughout the entire system. It increases the urinary and cutaneous secretions, and acts as a stimulant to the genital organs. It is invaluable in the treatment of atonic dyspepsia, and in the apepsia of chronic alcoholism. It is the most efficient agent that can be used to overcome the craving for alcohol in dipsomania.

"It is also useful in the treatment of the opium habit. Incipient delirium tremens may be prevented, and a pronounced attack aborted, the the administration every hour of half-drachm doses of the tincture of capsicum, or from twenty to forty grains of the powder.

Gastralgia, enteralgia, and flatulent colic may be readily relieved by a few five-minim doses of the tincture. Capsicum is effective in the treatment of flatulent dyspepsia, hysterical flatulence, and the tympanites of typhoid fever. It is also valuable in the latter disease, and in typhus and other low forms of fever as a general nervous and cardiac stimulant. It is a most potent remedy in cholera morbus, cholera infantum, and Asiatic cholera. Diarrhœa and dysentery, especially when due to the presence of fermentative material in the alimentary canal, may be quickly checked by large doses of capsicum. It will also be found of benefit in chronic malaria. It is more effective than any other remedy in the treatment of the asthenic types of scarlet fever, diphtheria, small-pox, and other zymotic diseases. In phthisis, anæmia, leucæmia, and chlorosis, it stimulates the appetite, promotes digestion, and increases the activity of the blood-producing organs. It is also valuable in the treatment of amenorrhœa of thin, pale, or nervous subjects. In these cases the tincture should be given in five-minim doses three times a day for a week before the time at which the menses are expected to appear.

"Capsicum is invaluable in the treatment of functional impotence, and the impotence of nervous subjects. It is serviceable in chronic constipation, and in hæmorrhoids due to relaxed condition of the rectal mucous membrane. A gargle composed of one drachm of the tincture of capsicum, two drachms of salt, and half a pint of water, will be found beneficial in chronic pharyngitis, relaxation of the uvula, and in hoarseness due to relaxed vocal chords."

Dr. W. A. Hammond bears equally strong testimony to the value of capsicum. He says: "Cayenne appears to be particularly useful in nervous dyspepsia, in

which there is an atonic condition of the stomach, and a tendency for the food to ferment instead of undergoing digestion. It is also specially beneficial when used with those of a vegetable character, which are not ordinarily digested without the evolution of large quantities of gas. Whether this gas comes from the food or from the patient is not definitely known, but no matter what its origin, its evolution is prevented by cayenne."

One of the most important of its uses has, however, passed generally unnoticed. It is of decided value in the treatment of opium poisoning. In the suggestion of its use in opium poisoning, I can claim originality, but not priority. Dr. C. H. Hughes was the first to use capsicum anemeta, in the treatment of opium poisoning. His case was as follows: A patient had taken opium with suicidal intent. Dr. Hughes being called in consultation by Drs. Roemer, Hypes, and others, after atropine and the usual routine remedies had been tried, ordered an enema of one dram each of aqua ammonia and tincture of capsicum, using coffee as a vehicle. The patient made a complete recovery.

In 1881 I was called to a case with the following history: A patient, suffering from the insomnia resulting from a prolonged debauch, purchased two ounces of laudanum and swallowed one. Within half an hour he sunk into a deep slumber. Dr. E. C. Dudley was called, who, by means of the stomach-pump, relieved the patient of about half the laudanum taken. Dr. Dudley found that, despite the use of strong coffee and constant movement, the patient did not improve. He then called Dr. Jewell in consultation, who advised the use of atropine. Under all these varied means of treatment there were temporary rallies, but after six hours of constant treatment the patient seemed to sink into and remain in a very deep coma. At this stage I was called in consultation, and having some faith in the old theory of derivation, ordered three drams tincture of capsicum to be poured directly into the rectum. The effect was almost magical. The patient walked around briskly, talked freely, and in about an hour was in his usual condition, other than being much exhausted and suffering from great dryness of the throat, obviously the result of atropine.

Case II. A five-year-old child of an opium habitué, drank about a teaspoonful of laudanum. Atropine, emetics, the stomach-pump, the galvanic battery were tried with temporary success, but the coma gradually deepened. Being then called in consultation, I ordered three drams of capsicum to be poured into the rectum. The child made a good recovery, but for some time thereafter suffered from inflammation of the rectum.

Case III. The twenty-four-year-old daughter of an opium habitué, while suffering from ague, took her father's two-grain dose of morphine in milk sugar in mistake for quinine, She sank into a deep coma before her mistake was suspected. The stomach was evacuated by the stomach-pump, emetics and strong coffee given, but without much effect. Half an ounce of tincture of capsicum given as enema in coffee produced a rapid and complete recovery.

Case IV. A ten-year-old boy swallowed what at the time were supposed to be ten homœopathic pellets, but which proved to be one-eighth grain morphine pills. He fell into a deep slumber before the character of the pellets was detected. Under the use of rectal injections of three drams of capsicum, the patient, after the usual measures had been adopted with very moderate success, made a good recovery, but suffered from proctitis for some time thereafter.

III. MATERIA MEDICA AND THERAPEUTICS.

Instantaneous Remedy for Lumbago.

Collodion, tincture of iodine, liquid ammonia, equal parts. To be applied widely over the parts with a camel's-hair brush. This applies to accidental or *frigore* lumbago or to rheumatic pain produced by a strain or muscular exertion.

Atropine in Nocturnal Earaches of Children.

In the nocturnal earaches to which so many children are subject, and from which they frequently cry a greater part of the night, the application, by dropping into the external cavity, of a few drops of a solution of atropine (2 grains to the ounce of water) will give prompt and effectual relief.

Francisceine.

Francisceine, according to the *British and Colonial Druggist*, is proposed as the name of a new alkaloid, which has just been extracted from the Brazilian manaca root, the produce of the Francisca uniflora and certain other species. The principle in question has a very powerful purgative and diuretic action, and is also possessed of diaphoretic and emmenagogue properties.

Remedy for Burns.

The *Weekly Medical Review* recommends as a valuable remedy in burns, the application of a solution of tannic acid in ether, of a syrupy consistence, which is said to relieve the severest pains almost instantly, while, at the same time, it forms a flexible non-contracting pellicle which has the advantage over the collodion film that it does not become hard and stiff. While this remedy may produce a momentary smarting on application, its use would seem to promise good results.

Unguentum Hydrargyri (*Lanolin*).

Mercurial ointment can be very quickly made with lanolin. Rub together 100 parts of mercury, 25 of lanolin, and 5 of old mercurial ointment, until metallic globules are no longer visible. Then add a mixture of 50 parts of mutton suet and 75 of lanolin, previously melted together. The product is an extremely smooth ointment without disagreeable odor, and therapeutically is much more efficacious than ordinary mercurial ointment, as it is more quickly absorbed. German physicians in prescribing it term the ointment *Lanolimentum Mercurale*.

Arsenic with Quinine in the Treatment of Malaria.

Dr. Ernst Hensler, of West Franklin, Ind., warmly advocates combining arsenic and quinine in the treatment of malarial fevers. He says that his resi-

dence in the Ohio bottom lands has given him a wide experience in this class of diseases. Like so many other physicians, he formerly used either quinine or arsenic alone, and often without success; but latterly he has been in the habit of giving the two drugs at the same time. Since commencing this practice, he states, all his cases were rapidly cured and no relapse occurred.

Kawa in Gonorrhœa.

Dr. SANNE recommends in the *Bulletin Général de Thérapeutique*, March 15, 1886, the kawa-plant for the treatment of acute affections of the urinary passages, especially of gonorrhœa. He gives four to ten pills of the extract daily, each pill containing $\frac{1}{6}$ grain of the extract.

The employment of kawa for these affections does not appear, however to be of a recent date, for Gobley and O'Rocke advocated the use of this drug as early as 1860 in the same French journal.

Antiseptic Paper Dressing.

Dr. DON ANTONIO MORALES PEREZ describes in the *Revista Médica*, of Seville, a simplified antiseptic or Listerian dressing consisting of bibulous paper heated to 110° C. and soaked in a solution of carbolic acid, boracic acid, or corrosive sublimate. This is placed over the wound in about eight layers, and covered with sheet gutta-percha or mackintosh, the whole being secured by an india-rubber bandage. The writer claims for this dressing the advantages of cheapness and portability, and thinks it will be found very serviceable in the field and in small hospitals.

Naphthaline in Urinary Diseases.

Naphthaline, which has been used to disinfect the stools, has also the property of retarding the putrefaction of the urine, and may therefore be administered for cases of urinary disorder in which the urine has a fetid odor. Daily doses of $1\frac{1}{2}$ grams of naphthaline for pyelo-nephritis, cystitis, chronic prostatitis and stricture with fistula have rendered the urine sweet in from two to five days. The urine, from being turbid, purulent and alkaline, becomes neutral or acid, and the quantity of pus is diminished. No disorder has been noted in the digestive processes. The drug does not augment the frequency of micturition.

Itch Ointment.

The following is said by the *Rundschau* (Prag.) to be a very active remedy against itch:

Take of

Flower of sulphur	8 parts.
Liquid tar	8 parts.
Lanolin	16 parts.
Green soap	16 parts.
Powdered pumice stone	5 parts.

Mix.

Pomegranate Root in Intestinal Affections.

Mr. Edward Nicholson, in a paper read before the Liverpool Medical Institution, claims great efficacy from the decoction of the pomegranate root in ounce

doses, three times daily, in certain intestinal affections of children. Whenever a child lost its appetite, had irregular bowels, tumid belly, was peevish and restless, was wasting, and had no symptoms of fever or worms, the pomegranate decoction invariably effected a cure. In certain obscure diseases of adults, where there was cachexia, with abdominal disturbance, it was also serviceable. No particular dietary is necessary. He has never seen any toxic effects from its use.

An Anodyne for Dental Caries.

Dr. K. GSELL-FELS (*St. Petersburgh Med. Woch.*) recommends the following mixture:

Rasped camphor	5 parts.
Chloral hydrate	5 parts.
Cocaine hydrochlorate	1 part.

On heating the mixture to the boiling point of water, an oily liquid is formed. This is to be applied lightly, and it is said that after a few applications the pain will surely be alleviated.

Quillaia Saponaria, a Substitute for Senega.

Senega is dear, has a bad taste, and is not well borne by the stomach in many cases. Dr. KOBERT finds (*Centralbl. für klin. Med.*,) that the bark of quillaia saponaria contains the same active principles as senega and in five times the amount, and recommends it on the following grounds: 1. It is better borne than senega. 2. The remedy is gladly taken, even by children, on account of its sweet taste. 3. Its power as an expectorant is beyond question. A decoction of the strength of 5 in 200 was used—half an ounce for adults, a teaspoonful for children. Goldschmidt *Aertz Intelligenzbl.*,) fully confirms KOBERT'S conclusions, and points out that quillaia is a sure, cheap, and not disagreeable expectorant.

Chloral Eruptions.

Dr. BARBILLION contributes a paper to the *Archives de Physiologie* upon a variety of erythema appearing in patients under the influence of chloral, upon the administration of alcohol. The chloral eruption was first recognized by Jastrowitz in 1868, and has since been met with by numerous observers. The point to which Dr. Barbillion calls attention is the almost mathematical regularity with which the exanthem appears under certain circumstances. Given a child of from four to eight years of age, who is taking from two to four grammes of chloral daily is repeated small doses, the administration of alcohol in the form of wine or spirit mixture will cause the appearance of the rash in from fifteen to thirty minutes.

Extract of Opium for External or Dermic Use.

Dr. E. R. SQUIBB (*Ephemeris*, January, 1887), speaks of the extract of opium as a very convenient preparation for external or dermic use, and for such purposes too much neglected or overlooked. Moistened with water to a semi-liquid consistence, and spread very thinly upon oiled silk, or upon adhesive plaster, leaving a margin for adhesion to the skin, it makes a very efficient application

for the relief of local pain, while it saves the general economy from a large proportion of the disturbances caused by the use of opiates by the stomach or hypodermically; because the effect is produced at the point affected, and does not have to be reached by the much larger quantity required to impress the whole organism.

Aperient Wine.

The formula for MONIN'S aperient wine is said by the *Progrès Médical* to be as follows:

℞. Tincture of calisaya,
Tincture of simaruba,
Tincture of gentian,
Tincture of bitter orange peel, āā . . . . . f.℥ ijss.
Tincture of ignatia bean, ... ℥ ss.
Sherry wine enough to make Oij. Mix and filter.

The wine is tonic, carminative and laxative. The dose is from 1 to 2 fluid ounces.

The Disadvantages of Milk Diet in Gastric Affections.

The treatment of various affections of the stomach by means of an exclusively milk diet has been attended by marked success; but if milk be given in too large doses, dilatation of the stomach may result. The benefit obtained may thus be only at the expense of a subsequent and grave inconvenience. Not more than 2 or 3 litres daily should be taken when the treatment is to last some time. If this amount of nourishment be deemed insufficient, meat, in some form or another, should be given, together with an alkaline to be taken frequently after meals. If the contents of the stomach be kept neutral, digestion takes place only in the intestines. If it be desired to avoid giving meat, the milk should be strengthened by the addition of concentrated milk.

An Agreeable Vehicle for Paraldehyde.

At a meeting of the Brooklyn Pathological Society, Dr. ECCLES recommended the following as an agreeable way of administering paraldehyde:

℞. Paraldehyde,
Almond oil, āā . . . . . ℥ ij.
Chloroform, ... ♏ x.
Oil of cinnamon, ... ♏ ij.
M.

One-half to be taken at bedtime, and the remainder during the night if required. It may be taken undiluted, although ordinarily it will be advisable to give it in a little water.

Cocaine in Vesical and Urethral Spasm.

Dr. BRICE M. HUGHES reports in the *Alabama Medical and Surgical Journal* a case of violent vesical urethral spasm relieved by cocaine muriate. In this case the suffering had been so intense as to necessitate the administration hypodermatically of morphia in three-fourth grain doses every three hours for several

days, with only temporary and incomplete relief. As a last resort two grains of cocaine muriate in olive oil (the doctor does not say how much) were injected and left in the bladder and urethral tract, after previous washing out with borated solution. "*The effects were magical*, relief instantaneous," followed by sleep. The effect, too, was permanent." The morphia was stopped and under tonic treatment he entirely recovered.

Styptic Paper.

According to the *Pharmaceutical Record:* "Styptic paper, much used abroad, though but little known here, is a new modification of medicated organic matter. It is made by mixing with paper pulp (during the process of manufacture of this material) some solution of ferric chloride, and carefully drying the product, or, in place of the iron solution, another variety is made with tannic acid. The proportions needed are about 1 part of iron solution to an equivalent of pulp that will yield 4 parts of dry product, or, if tannic acid be used, 1 part of the acid to make 8 parts of finished product. When made on the small scale, white absorbent (or blotting) paper may be used and made into a pulp, to which the astringents are added, and then carefully dried. It forms an excellent means of stopping bleeding, by simply binding on a small quantity of the prepared paper."

Mucilage of Acacia.

Mr. H. Noftke states (*Pharm. Zeit.*) that mucilage is best made with hot water. The water should first be boiled, then allowed to cool to about 80° C. This is then poured upon the gum arabic, previously washed with cold distilled water, and the whole is well covered, set aside in a cool place, and frequently stirred. Make up to the required volume, and strain through a woollen strainer previously washed with distilled water. The strained mucilage should be filled into small bottles previously dried in a drying oven, and still hot when filled. Mucilage thus prepared is said to be clear and bright, and, if put up as directed, keeps well, though it generally becomes faintly opalescent after a few days. If heated in a steam-bath, immediately after it has been strained, it will keep still better, but this second heating renders it opaque.

Treatment of Summer Diarrhœa in Children.

J. E. N., in a letter to the *Weekly Medical Review*, gives this synopsis of Dr. L. Emmett Holt's paper: "Dr. Holt's idea was that this disease was essentially a septic disease. It might be due to fermented food simply, or such material might develop ptomaines, which would set up general constitutional poisoning. In warm weather, and especially in tenement houses, such changes might commence in milk and other common articles of children's diet, even before indigestion. On this idea, the treatment advocated was essentially an antiseptic one. Dr. Holt had used various agents, and had most success with naphthol and sodium salicylate. Diet was, of course, a most important matter. He thought that milk should be avoided as much as possible, and recourse be had to whey, barley, water, etc. He often preceded the use of the above named remedies with castor oil."

Lantanine; A Quinine Substitute.

Lantanine is an alkaloid discovered by M. Negrete, and extracted from *Yerba sagrata*, of the family of verbenas. M. Buiza has observed that, like quinine, this alkaloid had some action on the circulation. It slows the nutrition, and at the same time lowers the temperature. The most delicate stomachs tolerate lantanine. Intermittent fevers that prove refractory to quinine have yielded to the influence of 2 grams of lantinine. In order to produce antipyretic effects in febrile conditions the dose employed is from 1 to 2 grams in 24 hours, given in pills of 10 cg. In intermittent fevers the drug is administered immediately after the paroxysm. Ninety-five times out of a hundred, a further paroxysm will not appear. The tincture of lantana cannot be employed, owing to its intense bitterness, which cannot be masked by syrup or wine.

Thymol as a Tæniafuge.

Dr. CAMPI recommends, in an Italian medical journal, the use of thymol as a remedy for tape-worm. A dose of about half an ounce of castor oil is given in the evening, when the patient should abstain from food, and take, next morning, two drachms of thymol, divided into twelve doses, one every quarter of an hour. About half an hour after the last dose has been given a dose of castor oil should be administered. This is usually followed by the expulsion of the dead worm. Thymol quickly depresses the pulse, respiration, and temperature, and to obviate any ill effects from this cause frequent doses of brandy or spirits should be given at the same time. The advantages of thymol are said to be that it produces no disturbance of the stomach, is rapid in effect, is both a tæniacide and a tæniafuge, and while certain in action, will do no great harm if an error in diagnosis has been made.

A Ten-minute Process for Mercurial Ointment.

Mr. C. S. Hallberg recommends wool fat as a "killing" agent for this ointment He states (*Western Druggist*) that the triturated 5 grams of mercury briskly in a mortar for ten minutes with 1-5 of purified wool fat, and it was completely extinguished; 3-5 of petrolatum was then incorporated, the resulting product being an ointment containing 50 per cent. of mercury, in which the globules were not visible with a magnifying power considerably greater than that required by the U. S. Pharmacopœia. In comparing the ointment thus made with a specimen purchased from a dealer a great difference was observed. While the first mentioned, when exhibited to the light in a thin layer and examined by a lens, was found to be perfectly opaque, the commercial specimen under the same conditions appeared translucent, with here and there a black speck suggesting a mixture of petrolatum and black-lead.

Gymnocaldus Canadensis.

The seed of this vegetable, which also is known by the name of Kentucky coffee bean, has the reputation of being a powerful toxic agent, resembling Calabar bean, with which it is mechanically allied. The watery extract of the *Gymnocaldus Canadensis* modifies the sensibility. Five minutes after a hypodermic injection of this preparation the frogs were insensible, and would not respond to

irritation. With a moderate dose the sensibility of the conjunctiva remained, and on increasing the dose the anæsthesia became complete; perception and sensation were abolished. Motor troubles, consisting of general convulsive movements, the rigidity and subsequent paralysis of the muscles being complete, resulted. These phenomena had their origin in the central nervous system. Gymnocaldus lessens the activity of the cardiac nerves and acts as a stimulant to the pneumogastric. The cardiac pulsations are diminished by one-half; and finally there is a lowering of arterial tension.

Resorcin Inoculations in Phlegmon.

Dr. LUDWIG WEISS, of New York, *Medical Record*, recommends very highly resorcin inoculations in phlegmon, especially of the fingers. He claims it is an effective remedy in all furuncular and phlegmonous inflammations; it abates the inflammation, if used in time, by destroying the germ locally, as well as in the lymph canals leading from the point of infection, at the same time acting as an anæsthetic on the sensitive terminal nerve filaments. Dr. Weiss makes a number of shallow parallel incisions through the integument into and around the lesion, then applies a thick layer of 10 to 30 per cent. resorcin lanoline ointment, then a piece of lint smeared with the ointment, then gutta-percha tissue, absorbent cotton, and a moist gauze bandage. The resorcin ointment must be applied abundantly and continuously. The ointment must be renewed twice daily. Relief from pain and tension ensues in from six to twelve hours.

Treatment of Diphtheria.

Dr. A. BRONDEL, in an article published in *Le Bull. Gen. de Therapeutique*, describes a treatment of diphtheria which has been uniformly successful in his hands. *More than two hundred cases* have been treated without a single death, a record which seems incredible. He considers benzoate of soda a specific in this disease, but recommends sulphide of calcium in addition. The following is his formula:

℞ Sodii Benzoatis, ... ʒj—ʒj gr., xv.
Aq., ... ʒ v.

M. Sig.—Tablespoonful every hour.

Calcium sulphide, gr. ½, is also given every hour with the potion. He also employs a spray of 10 per cent. solution of benzoate of soda given every half hour, night and day.

Idiosyncrasies.

A number of instances of idiosyncrasy in regard to drugs are related in the *Therapeutic Gazette*. One case was that of a gentleman who suffered from violent diarrhœa whenever he took any morphine. This man's father was in the habit of taking paregoric as a laxative; one teaspoonful of this preparation, taken at night, would always produce a soft evacuation in the morning. A resident surgeon at the Pennsylvania Hospital was obliged to resign, because whenever he went to work in the surgical wards he became afflicted with a crop of boils. He afterwards found that this was due to emanations from the turpentine which was used for cleaning the skin of patients after adhesive plaster had been applied.

Another curious idiosyncrasy was in a lady who suffered from fainting fits whenever she ate butter. She once took a tablespoonful of mashed potatoes, in the centre of which, unknown to herself, a piece of butter had been placed. In a few minutes she fell off her chair in a swoon.

Aconite in the Treatment of Pneumonia.

The *Med. Times* says: The treatment of pneumonia by tincture of aconite is not new, but its endorsement by Surgeon J. D. T. RECKETT, of the Army Medical Staff (*Indian Medical Gazette*, October, 1886), is so unequivocal that it deserves attention.

For six years nearly every case of pneumonia which has come into his hands has been treated with aconite, and in this period he has had only one case which ended fatally. In adult men of florid complexion, high temperature, rapid and full pulse, and usually dyspnœa and pain, he gives five minims (B. P.)—equivalent to gtt. j–ij, U. S. P.—every two hours with half an ounce of water, until the urgent symptoms are relieved; subsequently wine of ipecac and solution of acetate of ammonium are substituted. Hot poultices of flaxseed are applied, and low diet given. The disease, thus treated, rarely passes into the second stage of red hepatization.

The Influence of Drugs upon Digestion.

Dr. Klikovitch has been conducting a series of experiments to determine the influence of certain common remedies upon artificial digestion, and gives the following as the results obtained: 1. Alcohol. The addition of five per cent. has no influence upon peptonization; from five to ten per cent. retards the process, and more than ten per cent. stops it entirely. 2. Antipyrine produces no effect unless in very large doses. 3. Iodide and bromide of potassium slow digestion slightly in doses of from fifteen to thirty grains. 4. Organic iron salts do not influence the process, but reduced iron and the inorganic salts retard it somewhat. 5. Calomel and sodium arseniate have little effect; sodium salicylate and magnesia retard digestion when given in large doses. 6. Chloral hydrate does not influence digestion in doses of less than fifteen grains, but in larger amounts it exercises a very decided retarding action. 7. Sodium chloride, in whatever dose given, has no effect, neither hastening nor retarding the digestive process.

Piperonal.

Piperonal, an aldehyde corresponding to piperonilic acid, is obtained by the oxidation of piperine. It forms small, white, prismatic scales, possessing a strong odor of vanilla; a small quantity placed upon the tongue produces a sensation analogous to, but more persistent than that caused by mint. It melts at 125° F., and at a higher temperature volatizes completely. When ignited, it burns with a flame and smoke like those of camphor. It is insoluble in cold water; in hot water it melts and appears like drops of oil, it is readily soluble in alcohol and in ether. According to Dr. RICARDO FRIGNANI (*Gionale delle Scienze Mediche*) it possesses both antipyretic and antiseptic properties, which, while not very decided, are yet in many cases sufficient. It should be given in 15-grain doses, repeated every two hours, or three or four times a day. The most note-

worthy disageeeable effects are nausea, eructations, and dryness of the throat. As an antiseptic piperonal is very efficient, and will no doubt take high rank among other agents of this class.

Quinine Glycyrrhizate.

The *American Journal of Pharmacy* says that H. Hager, in the *Pharmaceutische Zeitung und Chemische Zeitung*, gives the formula for preparing this preparation in which the bitter taste of quinine is well masked.

Mix 1 part of ground licorice root with 1-5 parts of warm water (temperature 40° C. =104° F.). Allow it to macerate twelve hours, then and 1-5 parts distilled water containing 0.07 parts of water of ammonia (10 per cent.) and 0.015 parts of ammonium bicarbonate; finally exhaust by percolation with water. Filter the percolate, and add to it a solution of 0.075 parts of quinine sulphate dissolved in 0.500 parts of lukewarm water by the aid of 0.030 parts of hydrochloric acid specific gravity 1-124.

If the mixture still shows an alkaline reaction, neutralize with acetic acid. After repeated stirring, set the mixture aside several hours, collect the precipitate on a linen filter, wash it with a little distilled water, press gently, and spread on porcelain plates to dry in a warm place.

Sulphate of Sparteine.

HANS VOIGT, working in Nothnagel's clinic, has come to the following conclusions respecting the therapeutical action of sulphate of sparteine. In small doses the salt increases the efficiency of the cardiac contractions and raises the arterial pressure. The number of heart-beats is always increased. These effects are observed within an hour of the administration of the drug, and continue for twenty-four hours. The author recommends the suspension of the administration of the drug for some days, but it may be given for a week without risk. The remedy does not always regulate the rhythm of the heart-beats. Its action on the respiration is variable. Diuresis appears to take place in proportion to the improvement of the cardiac action. A beneficial sedative action is often observed. Headache, vertigo, malaise, and other objectionable symptoms were but rarely met with as the result of the administration of small doses. The dose employed has been from 1 to 4 milligrammes ($\frac{1}{100}$ to $\frac{4}{100}$ gr.). It will be remembered that in Sée's hands much larger doses, 5 to 20 centigrammes ($\frac{1}{10}$ to 3 gr.), were tolerated without cumulative or other objectionable effects.

Deep Intra-Muscular Injections of Mercury in Syphilis.

We abstract from the *Separat Abdruckaus der Allgemein. Wien. Med. Zeitung*, 1886, NOS. 32–34, the following conclusions of Dr. SCHADECK (of Kiew) concerning the advantages of deep intra-muscular injections of mercury in syphilis:

1. The injection is easily and quickly executed, and is less painful than the ordinary hypodermic injection.
2. Abscesses are never formed.
3. Coagulations, nodes, and indurations do not occur.
4. The metal is quickly and completely absorbed.

As to the technique of these injections, but little skill and experience is required. A canula about three inches long is fixed on a Lewin or Luer syringe, and the needle quickly pushed into the upper or middle portion of the gluteal region in an almost vertical direction. Then the syringe is emptied under an even pressure, the point of entrance pressed by the fingers for a few seconds, and then closed by adhesive plaster.

Aseptol: A New Disinfectant.

This substance is orthophenol-sulphuric acid, and has been known since the year 1841. It has been lately brought forward in France as a disinfectant, and Dr Huppe (*Centralb. f. d. Med. Wiss.*, No. 50, 1886), has made experiments with it, which have led him to the opinion that it possesses advantages entitling it to rank beside carbolic acid and bichloride of mercury. Commercial aseptol is a syrupy liquid, having a faint odor of carbolic acid. It is soluble in all proportions in water, alcohol, and glycerine, and even in a 10 per cent. solution has no caustic action upon the skin. Such a solution kills spores of anthrax in thirty minutes, whilst a 5 per cent carbolic acid solution requires at least twenty-four hours to produce the same effect. A 3 or 5 per cent. solution of aseptol is a true disinfectant for spore-free micro-organisms, or for such as do not form endogenous spores. A 3 per cent solution was found quite sufficient to disinfect the (previously cleansed) hands. Solutions of aseptol in alcohol, glycerine or oil (in the last named no permanent solution takes place) showed no disinfectant power. By heat it is changed into the corresponding para-combination.

Treatment of Diphtheria.

Dr. F. B. Drescher (*Weekly Medical Review*) has made use of the following treatment in diphtheria with marked success:

℞. Hydrargyra bichloridi . . . . . gr. ½.
Spts. frumenti . . . . . ℥j,
Syr. simplicis . . . . . ℥j.
M. Sig.—Teaspoonful every three hours, night and day.

℞. Liq. ferri subsulphatis . . . . . ℥ij.
Glycerin . . . . . ℥ij.
M. Sig.—Brush the throat once or twice daily.

℞. Tr. ferri chloridi . . . . . ℥ij.
Potassii chloratis . . . . . ℥j.
Glycerini . . . . . ℥iss.
Aquæ cinnamoni . . . . . q. s. ad. ℥iij.
M. Sig.—Teaspoonful in teaspoonful of water every three hours, night and day.

Eugenol, a New Antiseptic and Antiphlogistic.

Eugenol, or eugenic acid, is obtained, according to the *Archives de Pharmacie*, by treating a spirit of cloves with a wash of caustic potassa or soda. The crystalline mass is distilled, and the eugenol separated from the residue by the addition of a diluted mineral acid. It is then purified by distillation.

Eugenol is an oleaginous liquid, which possesses the odor and taste of spirit

of cloves; it is colorless, but becomes brown in the air or light. Its density is 1.068 to 1.070. It boils at 252° C. It is insoluble in water, soluble in alcohol or ether. It has the formula $C_{10}H_{12}O_2$. The perchloride of iron gives it an azure-green color.

It exerts undoubted antiseptic properties, and prevents the fermentation of urine. Doctors Emilio Morra and Candido de Tegibus have experimented with it as an antiphlogistic, but in this regard its action is inferior to that of quinine, antipyrin, or salicylic acid.

The *Rundschau* (Prag.) says that this remedy has been given in doses of three grams daily, but is not likely to prove of much benefit, as other remedies act better and more promptly.

An Anodyne for Use in Vesical Irritation.

Dr. W. P. COPELAND, of Eufaula, Ala., writes as follows to the *Medical Record*: "In almost every community there are old men who suffer from enlarged prostates, accompanied with a chronic inflammation of the neck of the bladder, rendering them miserable sufferers, and a care and anxiety to their friends and families. Having had the professional care of several of this class of cases, and dreading the tendency they so frequently acquire to the administration of opium for the relief of pain, I resorted to various washes for injecting the bladder, resulting in my adopting a solution of benzoate of soda, ten grains to one ounce of water, with twenty to thirty drops of the green tincture of gelseminum; this is warmed and injected by the patient through a soft rubber catheter, whenever the pain is severe, and the catheter withdrawn, leaving the medicine to be voided in twenty to thirty minutes; or where he is not able to pass anything from the bladder, the catheter is reintroduced and the medicine allowed to escape. My experience with this treatment has been so satisfactory that I cannot refrain from giving it publicity to the profession.

A Possible Danger Attending the Use of Ol. Pini Sylvetris.

Dr. HARVEY'S note on "A Possible Danger Attending the Use of Pure Terebene," in the Journal of January 29th, says Dr. ALFRED M. HYNES reminds me of two cases of strangury, which occurred in my practice from the use of ol. pini sylvetris in November last.

W. B., aged 75, suffering from bronchitis, muco-purulent expectoration, was ordered five-drop doses of the ol. pini sylvetris in the form of an emulsion, every three hours. There was a marked improvement, the dyspnœa being relieved and the expectoration diminished. On the second or third day, however, the patient complained of pain in the the renal region, extending into the pelvis and the right thigh. This was accompanied by severe strangury.

D. S., a man, aged 56, suffering also from chronic bronchitis, was treated with similar doses of the drug in the same form, He complained in a couple of days' time, of painful micturition and bloody urine.

In both these cases the drug was at once stopped, and the symptoms disappeared in a few days' time without any special treatment. There is no doubt in my mind that these symptoms were caused by the ol. pini sylvetris, although administered in such small doses.

A Novel Treatment of Phthisis.

The *British Medical Journal* says that Dr. BERGEON, of Lyons, recommends a method of treating phthisis which has, at any rate, the merit of novelty. His plan is to utilize the effects of sulphuretted hydrogen, and this he proposes to do by injecting carbonic acid gas, saturated with sulphuretted hydrogen, into the intestines. If care be taken to secure the absence of atmospheric air, no inconvenience, it is said, results from the injection even of large quantities of the mixture, absorption into the venous system and elimination by the lungs taking place very rapidly. It is claimed for this procedure that, by its means, the use of sulphuretted hydrogen is unattended with any toxic effects, and exerts its influence directly on the lungs themselves. It has been employed in a number of cases at the hospitals of Lyons, Bordeaux, and Paris with great benefit to the patients, even in very advanced cases, and latterly, similar observations have been made in the consumption hospitals of London, the results of which have not yet been made known. The method has been very much simplified by the introduction of an ingenious but simple apparatus whereby the carbonic acid gas is generated, and saturated with sulphuretted hydrogen, ready for use.

Oleum Eucalypti in Malarial Affections.

Dr MUSSER, of Philadelphia, records in the *Therapeutic Gazette*, a series of experiments with this oil in the treatment of various forms of malarial fever. He gives ten drops on a lump of sugar three or four times daily to adults. but states that three or five drops repeated oftener would be of more service. He says, "The oil of eucalyptus is of material value in malarial affections, and in cases where quinine is, on account of idiosyncrasy, inadmissible, the drug may be relied on in nearly one-third of all the cases of vague malarial intermittent affections." He concludes thus: "1. That the oil of eucalyptus is of decided value in about thirty-three and one-third per cent. in all cases of intermitting malarial fever. 2. That it has no specific value in any one type of the disease. 3. That the longer the duration of the disease the less liable it is to do good. 4. That relapses are not prevented by it. 5. That its influence on the spleen has not been demonstrated. 6. That a dose of ten drops four times daily has been a sufficient dose, but that five drops every three hours would be of greater value possibly. 7. That good results are not attained as quickly as by large doses of quinine, but that a good effect should be observed within five days at least.

Drumine; A New Australian Remedy.

Dr. John Reid, Port Germain, S. A., has published in the Australian *Medical Gazette* a paper describing a new active principle obtained from the *Euphorbia Drummondii*, a euphorbia growing in abundance in many parts of Australia, and dangerous to stock and sheep. By evaporating a rectified spirit tincture of the plant, adding ammonia, and separating the precipitate by filtration he obtains an "active principle" which he names *drumine*. The precipitate is dissolved in dilute HCl, the solution filtered through animal charcoal, and the filtrate slowly evaporated leaves a fairly pure hydrochlorate. Its aqueous solution is colorless and nearly tasteless. It is almost insoluble in ether, freely soluble in chloroform

and water, and these solutions deposit readily microscopic, acicular, and stellate crystals. Whether the principle is an alkaloid is doubtful. The therapeutic effects are very marked. Dr. Reid's experiments upon cats and on himself show that solution of drumine, either injected or ingested, has very striking anæsthetic properties. An injection of 4 minims of a 4-per-cent. solution quickly relieved a case of chronic sciatica, and a second injection effected a cure. It relieves cases of sprains so promptly that lead lotions will be forgotton. Dropped in the eye it produces insensibility of the eyeball, and relieves tic. Placed on the tongue it produces anæsthesia and loss of taste, even to quinine.

The Treatment of Diabetes with Pepsin.

In the *Indian Medical Gazette* for August, 1886, there is published a paper by the late Surgeon Major E. B. GARDNER as to the value of pepsin in the treatment of diabetes mellitus. About twenty-five years ago he commenced to prescribe it, and believes that he has obtained more advantage from its use than from any other single drug, although it should be combined with the standard remedies for this affection, and the well-known rules regarding special diet should be observed. He thinks that its use permits of some relaxation of the strict diet which it is impossible to continue if the disease is prolonged.

He reports a case in which, although not entirely cured, the sugar in the urine was reduced to one-third the quantity it was when he first came under treatment, while the patient was able to freely eat starchy and saccharine substances with comparative immunity, again an improvement over his previous condition, where before the slightest indulgence in sweet substances produced immediate, and a large increase in the sugar, with attendant intense thirst. During the course of this treatment a cataract operation was performed on his right eye, and resulted in a perfect cure.

He administered 5 grains of pepsin three times a day. Its continuation for six weeks reduced the quantity of urine passed from thirteen pounds eight ounces to five pounds daily.

Acetanilide—A New Apyretic.

A substance known to chemists who work with dyes by the name of acetanilide, which is produced by the action of heat on acetate of aniline, and is contained in rosaniline made with acetic acid and iron, has recently been found by two German observers, Drs. CAHN and HEPP, working in Professor Kussmaul's clinic (*The British Medical Journal*, 4th December, 1886,) to possess powerful febrifuge or apyretic properties. They have given it the trivial name "Antifebrin." It appears to have, weight for weight, about four times the power of lowering the temperature of fever-patients that antipyrin has. The dose given varied from 0.25 gramme to 1 gramme (4 to 15 grains), as much as 2 grammes (half a drachm) being given during the twenty-four hours. In every case in which Drs. Cahn and Hepp gave the drug, it produced more or less reduction of temperature; sometimes the thermometer registered a normal temperature for some hours together, and in these cases the appetite often returned. The action of antifebrin was accompanied by a certain amount of perspiration, and with some redness of the skin, sometimes also by thirst and an increase in the urinary

secretion. Occasionally a dark tint was observed in the skin of the feet and hands, but no serious symptom was observed in any of the twenty-four cases in which it was given. The price of the acetanilide is not high, being about a shilling an ounce. It can be administered conveniently in wine.

Treatment of Acute and Chronic Nasal Catarrh.

Dr. H. Marks, of St. Louis, writes to the *Therapeutic Gazette* as follows:

"I have a very good prescription for a snuff for acute or chronic catarrh, also traumatic rhinitis and acute coryza, especially when accompanied with pain of the nasal nerve. This formula effects a cure in twelve hours. It can be used as a snuff by the patient himself, or in a powder-blower.

℞. Coacine hydrochl . . . . . gr. x.
Ol. eucalyptus, ... gr. iij.
Iodoform, ... ʒj.
Milk sugar, ad q.s. . . . . ʒj. M.
Ft. triturate (snuff.)
Sig.—Use every two or three hours. When relieved use two or three times a day.

"Another formula which I have found of service is a modification of that recommended by Beverly Robinson, which is as follows:

℞. Pul. fol. belladonnæ, ... gr. xx.
Cocaine muriate, ... gr. v.
Ol. rosæ, ... gtt. j.
Pulv. gum acaciæ, ad q. s. . . . . ℥ss. M.
Ft. triturate (snuff.)
Sig.—Use with the powder-blower for anterior and posterior nares.

Mollin.

This is a new soap-preparation (name derived from *sapo mollis*), which is obtained by saponifying fat with potash and a little soda lye by a cold process, and which, in order to remove every trace of alkalinity, is made to contain an excess of 17 per cent. of fat. In order to obtain the consistence of an ointment it is mixed with 30 per cent. of glycerin during careful warming.

Kirsten, who recommends this preparation in the medical journals, claims as advantages for it: Good consistence, but little affected by changes of temperature, neutral reaction, the ease with which it can be rubbed down in the mortar and washed off from the skin, and, above all, the ease and thoroughness with which it can be mixed with any other medicament.

It is especially adapted for mixing with mercury. Such a mixture, called *Mol linum hydrargyri cinereum*, can be made of any degree of concentration from 1:1 down; is more quickly prepared than other mercurial salves; is easily applied, cleanly and intensely active, as mollin is very readily absorbed.

As mollin may be mixed with all sorts of substances, and is a link between medicated soaps and saponiments (opodeldocs), its mixtures will, therefore, resemble those of soaps or saponiments, and mixtures of mollin with storax, carbolic acid, tar, tannin, salicylic acid, peruvian balsam, chrysarobin, naphthol, corrosive sublimate, sulphur, thymol, etc., in the usual strengths, will prove of most value.

Arsenious Acid as a Prophylactic in Malarious Districts.

Progress says one of the great difficulties encountered in malarious districts is to find an easy and convenient means of preventing the paroxysms of fever which so often disable artisans and laborers, and which at times render utterly unfit for service whole armies of troops.

Tommasi Crudeli has found, after much study, covering a very large experience, that arsenious acid in doses of one-sixtieth of a grain has proven the most satisfactory prophylactic. The Greeks, Romans, and Arabs of Gaudaloupe have long inclined to rely upon the juice of lemons, prepared by cutting the lemon in small fragments and boiling it until its bulk has been reduced one half. It is then squeezed out from the pulp, filtered, and taken cold. The objection to quinine is that its effects are powerful upon the nervous system, and transitory upon the bacillus malariæ.

It is thought by many that malarious diseases prevail most frequently in winter, in consequence of the fact that during the summer large numbers of spore cells are blown into the house, and find lodgment upon the rough surfaces which, when the house is closed in the winter, the inhabitants are obliged to breathe large quantities of these spore cells, and the bacilli develop enormously, producing attacks of various forms of periodic disease. In summer the admixture of pure air is much greater, because people may freely go out-doors, and the quantity of these germs taken into the air-passages must be relatively small.

Antipyrin in Headaches.

The headaches which accompany fevers are treated by Dr. JOHN B. WHITE (*Medical Record*) by giving one or more doses of 15 grains of antipyrin. He says: "In the course of large experience with antipyrin, I have found that, when administered in masterful doses, it not only promptly relieves the symptom of headache whenever present, whether resulting from disordered digestion, disturbance of the menstrual functions, loss of sleep, undue mental effort, or even that associated with dreaded uræmia, but also possesses reliable prophylactic virtues against recurrent attacks of cranial neuralgia. So confident am I of the power of this remedy to disappoint neuralgic headache, when imminent, that I have instructed many patients, who are liable to such visitations, to keep in readiness and take a dose of antipyrin as soon as they have premonition of its recurrence, and all so far testify in favor of its efficacy. The value of this remedy in the above respect has not only been tested in my hospital and private practice, but I also record the fact that it has proved successful in the hands of professional friends, upon whom I had urged its employment, for the relief of neuralgic affections of the head and face. I have been singularly impressed with the promptness of relief which often followed the administration of even a single dose of 15 grains of the antipyrin. The grateful relief from headache usually ensues within half an hour after the drug is taken. A sense of drowsiness ordinarily supervenes, followed by a brief but sufficient slumber, and the patient awakens quite relieved of this distressing symptom. I have never yet seen the sleep-disposing properties of antipyrin alluded to by any other observer, although this effect seldom fails to ensue when a full dose, such as I have named, has been taken."

Hamamelis in the Treatment of Diseases of the Skin.

Dr. John V. Shoemaker (*The Medical Bulletin*, Dec., 1886) discusses in a short paper the therapeutic action of hamamelis in certain skin diseases. Witch-hazel has been a domestic remedy for a long time for piles, cuts, sores and hæmorrhages. Dr. Shoemaker employes it both internally and externally in treating certain skin diseases. He says that given internally in the form of the fluid extract it appears to lessen the flow of blood through the vessels in inflammatory affections of the skin, and thinks its action is more decided in eczema than in any other form of skin disease, especially in the acute and sub-acute forms. "In cases in which the disease is more or less general, the surface hot, red and tumid, the use of from one to thirty minims of the fluid extract of hamamelis in water or on sugar every two or three hours often has a decided and speedy good result." He says that in lessening the flow of blood through the vessels it relieves, and with the aid of some appropriate local treatment a cure is obtained.

He commends it highly in infants suffering from pustular eczema or crustes lacta. In infantile cases the fluid extract can be given in doses of from one-half to five drops, repeated every two hours. Applying it locally in eczema he uses either the tincture or diluted fluid extracts. In applying the tincture locally he uses from two to eight drachms in four or five ounces of water.

For an ointment, one-half to two drachms of the extract may be rubbed up with lard, suet or preferably, lanoline. He also uses it in erysipelas locally and internally; in seborrhœa oleosa and such, in excessive sweating of the feet, in alopecia, in ulcers, especially psoriasis. In arresting the excessive secretion of sweat that occurs on the hands and feet, and in the axillary and inguinal regions, the efficacy of the tincture can be increased by adding boracic acid. In fetid secretion of the feet, hamamelis is enhanced by adding corrosive sublimate.

Hydrastis Canadensis.

Dr. Woltering, of Münster, confirms, in a paper published in the *Allgemeine Medicinische Central Zeitung*, No. 47, 1886, the favorable results obtained with hydrastis canadensis by Fellner and other therapeutists of note.

The styptic virtues of the drug, especially in uterine fibro-myomata are very pronounced. Thus, Woltering saw cessation of the hæmorrhages in three cases of fibro-myoma with a uterus-length of 9 and 8 ctm. In one of the cases the uterus-length had at the end of one year decreased 2 ctm. True, besides the drug, the patient had had the benefit of long-continued self-tamponage and warm washes. The remedy was ordered in pill form on account of its unpleasant taste. Ten grammes of the fluid extract can conveniently be evaporated down to about three grammes of a dry extract, furnishing an excellent pill mass. Woltering orders usually as follows:

℞. Extr. hydras. canad. sicci. . . . . 6.00.
(To be prepared from fluid extr. . . . . 20.00.)
Extr. secal. corn.,
Ferri. redacti . . . . . aa 3.00. M.
F. pil., No. 120.
S.—Two to 5 pills every three or four hours.

Of course morphine, aloes, or any other indicated remedy, could be incorpo-

rated with this styptic. The above pills are taken readily and well borne, especially when taken during or after the meal. Woltering claims that neither wine, aromatics, nor liquorice cover the taste of hydrastis canadensis sufficiently.

In simple hæmorrhagic endometritis the remedy renders also excellent service. In profuse bleeding from the lungs and stomach, however, a teaspoonful of oil of turpentine seems to be preferable.

Practical Therapeutics.

The address delivered by Dr. James Little before the medical section of the Academy of Medicine in Ireland dealt with the subject of practical therapeutics. The object of his remarks was to urge the desirability of greater precision in the use of medicines, and in the employment of other therapeutic measures. Among the circumstances which have led to an erroneous estimate of the power of medicines and therapeutic measures, he insisted on the undue influence of preconceived notions as to what those effects should be. He instanced the employment of iodide of potassium in the treatment of meningitis, and its neglect as a remedy for bronchial asthma. The use of astringents, such as tannin, ergot, and iron in cases of hæmaturia, was another instance of treatment which, if theoretically correct, was probably quite devoid of success in practice. He considered the use of iodide as an application to enlarged glands to be a relic of a bygone "run" on iodide, and the results of which were generally unsatisfactory. His remarks on the "endless preparations," due to the ingenuity of pharmaceutical chemists who extol them on the ground of their special adaptation to particular forms of disease, are instructive. A few, he says, are more convenient and more effectual than the pharmacopœial preparations, but the majority of them have no other claims on our acceptance than the positive and plausible assertions of the persons interested in their sale. Another circumstance which has militated against a just appreciation of the powers of medicines is an insufficient recognition of the fact that apparently slight differences in the manner in which they are administered often make a great difference in their effects. A dose of morphine which would be powerless to relieve cough in an aqueous vehicle will promptly effect that object if dissolved in a viscid substance. A not important item is simplicity in prescribing. Without this the prescriber can only rough-gauge what the effects are likely to be, and when good results are obtained he will be unable to ascertain which of the constituents is to be credited therewith.

Strychnine in Alcoholism.

The satisfactory results obtained by Dr. N. M. Popoff (see *Brit. Med. Jour.*, 1886,) from the treatment of dipsomania by strychnine, have induced Dr. Alexander S. Partzevsky, conjointly with Dr. Dr. P. A. Dobronravoff, to try (*Meditz. Oboz.*, No. 15, 1886,) that plan in nine cases of acute and chronic alcoholism admitted to the Basmannaia Infirmary for Laborers in Moscow. The drug was injected under the skin, the following formula being invariably employed:

℞ Strychnini nitrici, ... ½ gr.
Aq. destil., ... ℥ss. + gr. x.
M. S.

To inject three divisions of Pravaz's syringe (that is, one-hundredth of a grain

of the alkaloid) twice daily. In seven of nine cases the results were very satisfactory; in two no improvement ensued, the patients being ultimately cured by tincture of capsicum and chloral. The outcome of the observations is this: (1) Under the influence of the hypodermic injection of strychnine, as a rule, sleeplessness, hallucinations, and anxiety soon disappear, appetite improves, trembling of hands rapidly subsides to subsequently cease altogether, and irritability is calmed down. (2) No other treatment can so rapidly bring back the outward appearance of the patients to the normal condition, as far as cyanotic discoloration of the skin and swelling of the face and hands are concerned. [The author thinks that the disappearance of the symptoms last named may stand in connection with a marked increase in the amount of urine. The daily quantity of the latter in two patients after several injections rose to 1,600 or even 2,500 cubic centimètres.] (3) The formerly irresistible craving for alcohol also disappears. (4) The duration of the patients' stay at the hospital varied between four and thirty-nine days, and depended chiefly upon intercurrent diseases—croupous pneumonia in two cases, scurvy in one, etc. (5) The number of the injections ($\frac{1}{100}$ grain each time) usually varied between four and eight. In one case only, fifteen injections were made.

Antipyrine in Pneumonia.

Dr. JESSE B. HALL thus writes in the *Med. Age*: I have used antipyrine in the following cases of pneumonia.

Case 1.—Kate B., æt. 1½ years. Broncho-pneumonia. Temperature, 103; pulse 135; respiration, 50 per minute. Coughing quite frequently and very deep. Administered antipyrine, gr. iv., every three hours. Improvement from the first dose.

Case 2.—Louis H., æt. 3 years. Congestion and slight inflammation of the lungs. Temperature, 102°; pulse, 125; respiration, 48. Administered antipyrine, gr. v., every three hours. Rapid recovery.

Case 3.—Infant son of Patrick S., æt. 2½ months. Brocho-pneumonia with cerebral congestion. Administered antipyrine, gr. iij, every two hours. Head symptoms disappeared in ten hours, and the patient made a rapid recovery.

Case 4.—Marl D., æt. 3 months. Broncho-pneumonia. The attending physician having pronounced the case hopeless, I was called in, and found the little patient with a pulse of only 42, and very depressed, and found the parents still administering veratrum viride, muriate of ammonia, and aromatic spts. ammonia, under the direction of the attending M. D. I immediately stopped all medicine, except antipyrine, gr. iij, every hour for eight hours, and tr. opii camph. gtt iv, every two hours. Patient commenced improving from the first dose.

Case 5.—Henry F., æt. 21. Lobular pneumonia. Temperature, 103°; pulse, 100; respiration, 32. Administered antipyrine, gr. x, every three hours. Discharged from my care, cured in ten days.

Case 6.—Elmer D., æt. 10. Lobular pneumonia. Temperature, 102°; pulse, 96; respiration, 28. Administered antipyrine, gr. x, every four hours. Discharged him cured in eight days.

In these cases profuse perspiration followed the administration of the antipyrine, and the respiration and pulse were immediately depressed to nearly normal, while the temperature fell to 99° or 100°.

The only other treatment was the administration of a cathartic, and the application of hot fomentations to the lungs.

I would like to hear from others upon this subject; also upon the propriety of giving ammonia muriate in the active inflammatory stage of broncho-pneumonia.

Rectal Injection of Gases.

At a recent meeting of the Biological Society, of Paris, M. MOREL commented on M. Peyrou's experiments on the effects of the rectal injection of sulphuretted hydrogen in dogs, and compared the doses with those employed in the treatment of tuberculosis. One hundred and fifty cubic centimètres of a saturated solution of sulphuretted hydrogen were injected in two doses at intervals of three minutes. Symptoms of poisoning began to be manifested within two minutes, and death took place in ten minutes. Another dog died quickly after two injections of the same strength, given at intervals of twelve minutes, while two others, in whom only very small quantities of the gas, or large quantities very much diluted, had been injected, experienced only slight inconvenience, and rapidly recovered. M. Peyrou concludes that sulphuretted hydrogen is harmless only when injected in small doses. With regard to these experiments, M. Morel observed that the quantities injected were enormous, being ten or fifteen times as great as those employed in man; and, supposing the dog to be four times lighter than man, the dose injected in the dog was really forty or fifty times as great as that employed in man. M. Morel then described in detail the mode of proceeding in the treatment of tuberculosis. The patient should be placed on his back in a position to allow free expansion of the intestines, and the operator must carefully note any resistance to the entry of the gas, so as to allow absorption to take place during the operation. The breathing should be watched, especially when the pulmonary lesions are extensive, as any deficiency in respiration will make the elimination of the gas correspondingiy difficult. Moreover, the substance used in the above experiments on the dog is not the same as that employed in pulmonary affections. In the latter case, the gas which is injected is a mixture of carbonic acid and sulphuretted hydrogen, and possesses properties very different from those of sulphuretted hydrogen alone. When intestinal irritation takes place, it is because the gases are not properly mixed. M. Peyrou injected into the dog 25, 35, 90, and even 100 cubic centimètres of sulphuretted hydrogen dissolved in a considerable quantity of water. In man, the quantity injected is not more than 25 cubic centimètres. M. MOREL then described an apparatus for making these injections, the chief objects aimed at in its construction being to prevent any atmospheric air from mingling with the sulphuretted hydrogen and carbonic acid, to moisten the gaseous mixture, and to prevent too great distention of the intestine.

Sulphurous Acid Fumigation in Whooping Cough.

This treatment is reported in the *Revue Internationale des Sciences Médicales*, Nov. 30, 1886, by Dr. E. MARTEL, under the title of "Immediate Cure of Whooping Cough." "Six years ago (says Dr. MOHN), my eldest little boy, then 10 years old, had scarlatina and whooping cough. The attacks of coughing came on about a week after the scarlatina appeared, the latter being only a slight illness. At

the end of six weeks, five weeks after the cough had begun, the child's room and clothing were thoroughly disinfected by sulphur fumigation (in order to destroy any scarlatinal virus). There had been violent coughing only some hours before the fumigation, and Dr. Mohn had hesitated about the latter. To his surprise *the fumigation at once and completely cured the cough*, not only in the boy, but in a sister a little older than himself, who also had a cough. Four years afterwards a little girl of Dr. Mohn's, aged 3 years, had severe whooping cough. Three brothers and sisters were attacked by it at the same time, but not so seriously. The little girl had also bronchitis, and was much weakened by epistaxis —in fact, her life was endangered. All kinds of medicines had been tried, including chloroform and carbolic acid inhalations, but without any effect. Dr. Mohn then remembered the sudden cessation of the cough in his eldest son's case four years previously, and burnt sulphur as before. There were only two slight attacks of cough during the following night, and it ceased entirely the next day. Other cases were then tried. A little girl, aged 5 months, who had had whooping cough for five weeks, and a boy, aged 4 years, who had coughed during four days, were healed as if by enchantment after one fumigation. A child, 3 years old, and three brothers and sisters, all suffering at the same time from whooping cough, were immediately cured by a single fumigation of sulphurous acid. A child of one year, having convulsive cough for a month, was at once cured by the fumigation. The following is the mode of operation: The children are in the morning put into clean clothes and removed elsewhere. All their clothes and toys are brought into their bedroom, and then sulphur is burnt upon a few live coals in the middle of the room. The gas is allowed to remain in the room for five hours, and then the windows and doors are thrown open. The child sleeps in the room the same evening. About 25 grammes (a little under an ounce) of sulphur to every cubic metre may be burnt. At a meeting of the Society of Medicine in Kristiania, Dr. Schönberg supported Dr. Mohn in his belief that the sulphurous acid acted by destroying all pathogenic spores lurking in the air, the bedding, clothes, etc.

Is Iodoform Antiseptic.

The widespread employment of iodoform as an antiseptic dressing may receive a check should the conclusions arrived at by MM. Heyn and Rovsing of Copenhagen be confirmed. These observers have (*Vortschritte der Medicin*, 1887, No. 2) been making experiments with iodoform to test its value as an antiseptic, which they point out is so generally accepted that the surgeon does not hesitate to employ a non-sterilised spatula, or to insufflate ordinary air with the powder, procedures which he would shrink from employing were it not for the belief that the iodoform can destroy the germs adhering to the one or suspended in the other. Yet as iodoform is rarely used to the exclusion of other antiseptics (as carbolic acid or mercuric chloride), there is never much opportunity, clinically, of testing its germicidal properties. Mikulicz, in 1881, tested the action of iodoform upon putrefaction, but with no definite result; and Rummo's experiments in 1883 were complicated by his use of oil of turpentine as a solvent for the iodoform. Meyer found in one case of abscess that iodoform had no effect in reducing the virulence of the pus, and in another that it had as light action. The

results of the research pursued by MM. Heyn and Rovsing surprised themselves. Acting on the theory that it is through liberation of free iodine that iodoform enjoys its germicidal reputation, they prepared solutions of iodoform in olive oil and in serum, and, having sterilized them, mixed them with culture media, and studied the effect of cultures of various bacterial organisms in these mixtures, as well as under iodoform powder alone. They also experimented on rabbits by mixing inoculation fluids with iodoform. The details of the experiments need not be reproduced here; suffice it to say that in no case did the presence of the substance interfere with the development of micro-organisms. So that they conclude that as an antiseptic its employment in surgery is valueless. But, more than this, its use is dangerous, for, as two of their experiments proved, iodoform itself may contain pathogenic micro-organisms; and even if all care be taken to purify it, yet it may become the medium of the conveyance of pathogenic germs introduced into it through the spray of spatula. We trust that these experiments, which have received such prominence, will be repeated, for, if confirmed, we can imagine that the use of iodoform (apart from any other antiseptic) would in certain circumstances be serious. It would be deplorable if in any such case the material upon which the surgeon relies to protect his patient from bacterial invasion should prove to be the means whereby such invasion occurred. The writers of the article themselves advise that before using iodoform (which is valuable as a dressing on other grounds than as an antiseptic only), it should be disinfected in sublimate solution.

Employment of Electricity in the Treatment of Diseases of the Urinary Organs.

In the *Brit. Med. Jour.*, November, 1886, Dr. STEAVENSON states that the results obtained by the treatment of the genito-urinary organs by electricity are most satisfactory. The lowest centres or points for the reflection of impulses connected with the genito-urinary apparatus are situated in the lumbar enlargement of the cord, and by placing one electrode on the spine over the lower dorsal region, and the other to the affected organ, the whole nervous supply of these parts can be included in the circuit. Cases of nocturnal incontinence in children in which no reflex cause can be found, are often cured by passing a weak current through the region of the bladder. A pad, connected with the negative pole of the battery, is placed over the dorsal region of the spinal column, and a small button electrode on the perinæum. By placing the negative electrode on the back, a stronger current can be borne than if the button of the perinæum were made negative. In cases of simple incontinence of urine, when the sphincter is not at fault, and when the affection is due to loss of power of inhibition during sleep, or to paralysis of the muscular coats of the bladder from over-distension or other causes, then one electrode may be placed over the pubes. In cases, however, where there is weakness of the sphincter, unless an electrode is placed in the urethra itself, the best place is without doubt in the perinæum, as the sphincter vesicæ does not get included in the circuit when the electrode is placed over the pubes. Undue frequency of micturition is also relieved by galvanism, and when this is due to cystitis the electric current produces a healthier condition of the bladder-walls, causing an improvement in the frequency of micturition. Neural-

gia of the pudic nerve is often relieved by galvanism. In the application of electricity to the bladder for atony, incontinence, or frequency of micturition, a current from two to five milliampéres, applied for eight to ten minutes every day, or every other day, for about ten days is all that is generally required. One of the most useful applications of electricity is in the treatment of stricture of the urethra by electrolysis, but the elaborate apparatus required prevents its general use. By this method a stricture can be, as it were, absorbed without any bleeding. If hæmorrhage does occur it is accidental, and usually shows that a too strong current or the wrong pole of the battery has been used. No anæsthetic is required, as the discomfort is trifling. After electrolysis has proceeded so that the electrode will pass into the bladder, it is found a fortnight later that a bougie of two sizes larger can be passed. In penile strictures it will be noticed after treating them by electrolysis, that a few days afterwards no hard dense tissue can be felt. The author strongly advocates this method of treatment, as he and Mr. Bruce Clarke have met with much success since they commenced its use.

How to Make a Poultice.

Dr. T. Lauder Brunton, editor of the *Practitioner*, makes the following remarks, and gives the following directions for making a poultice:

"In surgical cases we usually use the warmth and moisture of the poultice to act directly on the surface. We therefore make the poultice with crushed linseed or with linseed meal and oil, spread it on some tow, and apply it to the skin without anything intervening. But useful though this method may be for wounds, ulcers, and abscesses, it is not the best form of application in cases of inflammation of the thoracic or abdominal viscera, or when spasm is present without inflammation. In such cases we may, no doubt, do some good by applying the poultice to the surface exactly as in surgical diseases. We may draw off some of the blood to the surface; and we may also exercise a reflex action through the nerves upon the vessels of the inflamed organ below, but this will not be so great if we influence the surface only, as when we allow the heat to penetrate to the inflamed or irritated organs themselves. If we apply the poultice directly to the skin, it must be allowed to become tolerably cool before the patient can bear it, and thus half its advantage is lost. In order to relieve spasms, as in colic—intestinal, biliary or renal—to relieve inflammation of the pleura, the lungs, the liver or other organs—we want to apply the poultice as hot as possible, while we protect the skin from being scalded.

"In order to do this, a flannel bag should be prepared, a convenient size being twelve inches by eight; this should be closed at three edges and open at the fourth; one side of it should be about one inch or one inch and a half longer than the other, and it is convenient also to have four tapes attached at the points which form the corners when the bag is closed, in order to keep the poultice in position. Besides this, another strip of flannel should be prepared of the same breadth as the length of the bag, and long enough to wrap around it once or oftener. Crushed linseed, bowl and spoon should then be got together, and the spoon and bowl thoroughly heated by means of boiling water; the poultice should then be made with perfectly boiling water, and rather soft. As soon as it is ready, it should be poured into the bag, previously warmed by holding it before the fire;

the flap which is formed by the longest side of the bag should now be turned down and fastened in its place by a few long stitches with a needle and thread; it should then be quickly wrapped in the strip of flannel (also previously warmed), and fastened *in situ*, if necessary, by means of the tapes. It may be covered outside with a sheet of cotton wool. In this way the poultice may be applied boiling hot to the skin without burning; the two layers of flannel which are at first dry allow the heat to pass very gradually indeed to the skin; as the moisture of the poultice soaks through them they become better conductors, and the heat passes more quickly, but the increase is so gradual as not to cause any painful sensation whatever, but only one of soothing comfort. The poultice also naturally keeps much longer hot, and the necessity for changing it arises much less frequently.

"The difference between the effect of a poultice made the ordinary way and in the manner just described is sometimes exceedingly striking. It is perhaps less marked in cases of inflammation than in those of spasm. We have seen a patient suffering from intense abdominal pain at once relieved by a poultice made in the way just described, although a succession of poultices made in the ordinary way had been utterly useless. This way of making poultices is one of the minutiæ of medical practice, apparaently extremely trivial, but really, we believe, very important. The relief which we have seen afforded by poultices made in this way, and the knowledge that *some* practitoners at least are ignorant of the method must be our apology for drawing attention to such a trivial detail."

The Injurious Effects of Blisters.

Dr. Wyss, of Geneva (in *Der Fortschritt*, No. 1, Jan. 5, 1887), warning against the use of blisters, writes:—Blisters, although devoid of real remedial properties, are still daily prescribed, perhaps more with the view of sustaining the hopes and confidence of the patient, and of gaining time for the natural process of recovery, than in expectation of actual benefit. The long experience of an extensive practice leads me to consider blisters an unnecessary cruelty to the patients, which ought entirely to be discarded. I myself, like my colleagues, have employed blisters in the treatment of pneumonia, pleurisy, sciatica, and other diseases, but I failed ever observing the slightest benefit from their use. On the contrary, I found them more or less injurious. Blisters disturb the sleep of the patient, so much in want of restorative rest; they impair in many irritable patients the urinary organs, and they frequently bring on obstinate cutaneous eruptions. Moreover, they cause actual harm by almost invariably increasing the fever in already feverish patients, and thus seriously affect the general condition. A case recently under my observation will support my verdict against blisters. Mr. B——, aged 40, has been suffering for about two years from tubercular disease of the left lung, which lately brought on a pleuritic exudation. I consented, only yielding to the urgent request of the patient and his family, to the application of a blister. This not having acted, the patient demanded another, and a third. The usual temperature varied between 98.5° F. (37° C.) in the morning, and 102.2° F. (39° C.) in the evening. The following are the temperatures at the time, and after the application of the blisters:—

	Morning.		Evening.	
	Fahrenheit.	Centigrade.	Fahrenheit.	Centigrade.
	deg.	deg.	deg.	deg.
Nov. 18	98.06	37	102.2	39
Nov. 19	98.06	37	101.3	38.5
Nov. 20.—Blister in the evening	98.06	37	102.2	39
Nov. 21	101.3	38.5	104.36	40.2
Nov. 22	101.3	38.5	103.1	39.5
Nov. 23	99.5	37.5	103.1	39.5
Nov. 24	98.06	37	102.2	39
Dec. 2	98.06	37	101.3	38.5
Dec. 3	98.9	37.2	102.2	39
Dec. 4.—Blister in the evening	98.06	37	109.04	42.8
Dec. 5	102.2	39	104.36	40.2
Dec. 6	99.5	37.5	103.28	39.6
Dec. 7	98.06	37	103.1	39.5
Dec. 8	98.06	37.2	102.2	39
Dec. 15	98.06	37	102.75	39.3
Dec. 16	99.5	37.5	101.3	38.5
Dec. 17.—Blister in the evening	98.06	37	104.3	40.5
Dec. 18	101.3	38.5	104	40
Dec. 19	99.7	37.6	103.28	39.6
Dec. 20	99.14	37.3	102.56	39.2

The patient had extremely restless nights; he entirely lost his appetite, and became weaker than he had ever been before. I observed several cases of similar disturbances in consequence of blisters in pleurisy. All my experiences tend to convince me that blisters are a therapeutical mistake, and an unnecessary cruelty to the patients, and therefore ought entirely to be abandoned.

Narceine in Whooping-Cough.

Dr. Llewellyn Eliot thus writes in the *Jour. Am. Med. Asso.*: Whooping-cough is one of the most distressing diseases of childhood, although it has been observed in adults. It seldom occurs before the sixth month of life, nor is it frequent after the eighth year. Second attacks are exceedingly rare. Barthez and Rilliet mention a case occurring on the day after birth, the mother having had the disease four weeks previously. Bouchet mentions a case infected on the second day of life, developing on the eighth. Keating records a case of a child born with the disease. Steiner has seen it between the second and third weeks.

The pathology of the disease is unsettled, but it appears to be a catarrh of the respiratory organs, combined with an affection of the respiratory nerves, rather than a pure neurosis. This unsettled pathology has led to the employment of remedies without number. Among them may be mentioned hydrocyanic acid, potassium bromide, ammonium bromide, hyoscyamus, digitalis, alum, lobelia, ipecac, potassium bicarbonate, belladonna, atropine, opium, morphine, musk, sodium et aurum chloride, cocaine, tartar emetic, insufflation and inhalation of quinine. Success and failure have followed the use of each.

In the *Medical Record* of July 17, 1886, is an editorial on the treatment of whooping-cough, and among the remedies mentioned is narceine. This alkaloid was introduced as a remedy for this disease by Laborde, as far back as 1869, but the physicians of Philadelphia who employed it about ten years ago failed to

obtain the results which were claimed for it. The recent visitation of the disease has afforded me a peculiar experience.

It was my intention to thoroughly test this treatment; my reasons for not doing so will be seen from what follows. On July 12, W., born July 3, showed symptoms of whooping-cough, his mother having contracted the disease five days before his birth. He was given on the 19th the following prescription, other remedies having failed to afford relief:

℞.	Narceine	0.133 gm. (gr. ij).	
	Aq. destillat	8 c.c. (ʒij).	
	Syr. acaciæ	40 c.c. (ʒx).	ṁ.

Sig.—Teaspoonful every three hours.

This would make the dose .0110 gm. (gr. $\frac{1}{6}$) the minimum, but to insure safety only $\frac{1}{4}$ of a teaspoonful was given three times a day. Following the second dose there was a decrease in the quantity of urine; the dose was then lessened to 5 drops with the following results: entire suppression of urine, great drowsiness, refusal to nurse, constipated condition of the bowels, and great restlessness. The urine not being voided from 4 in the evening till 6 in the following evening, he was given .0016 gm. ($\frac{1}{10}$) podophyllin every three hours until the bowels were freely moved; 5 drops of spirits of nitre every two hours, and hot poultices to encircle the entire abdomen. This continued until 12:30, when the bowels were acted upon freely and the urine voided; at 8 he again passed urine; the nitre was then continued at four-hour intervals. The whooping-cough was not benefited in the least. Possibly, had the narceine been continued, the effect might have been different; but with such a state of affairs as here presented I could not have the hardihood to do anything which would tend to increase the unfavorable outlook.

This is one experience with narceine. The dose may have been too large, .0025 gm. (gr. $\frac{1}{24}$), if so, the condition should have altered when it was lessened. I have no intention of doubting the results obtained by other observers, nor of questioning the reports made concerning the use of "Narceine in Whooping-cough," but I cannot refrain from making known the unfavorable result which followed at my hands. After the effects of the narceine wore away, the child did as well as one so young could be expected upon alum and syrup of wild ginger, to finally have violent convulsions and die on August 2.

Antifebrin.

The *Brit. Med. Jour.* says: This new drug appears to possess certain advantages which render it worthy of more extended trial. Drs. Cahn and Hepp, whose report may be found in the *Centralb. f. d. Klin. Med.* 1886, No. 33, have just published a second and more elaborate report on antifebrin in the *Berliner Klin. Wochenshr.*, 1887, Nos. 1 and 2, the more important facts of which are here reproduced.

Antifebrin is acetanilide or phenylacetamide, and has the formula $C_6H_5NHC_2H_3O$. It is produced by the action of heat upon aniline acetate, one molecule of water being driven off. It is a light crystalline powder, very stable in composition, undergoing distillation without alteration, and being unaffected at the ordi-

nary temperature by acids or alkalies. It melts at 113° C., and boils at 292° C. It is almost insoluble in cold water, requiring 160 parts for its solution, but is soluble in 95 parts of hot water, and easily soluble in alcohol, ether, brandy, or strong wine. It may be conveniently administered suspended in water, as it has no bad taste, but only a slight and not unpleasant sensation of burning, and patients evince no aversion to it, even after its administration for a long time.

The action of this drug in reducing temperature is most certain; it never fails to lower it by several degrees. It is four times as strong as antipyrin in its effects, is very cheap, does not cause vomiting, and rarely causes any rigors, as the temperature subsequently rises again. Moreover, it causes no cerebral disturbance, and the appetite even improves under its use. In a few cases some degree of cyanosis of the face and limbs was observed; this, however, always disappeared (without any symptoms of shivering as it faded off), and the authors paid very little attention to it. Indeed, they complain that certain remarks in some chemical advertisements have been exaggerated in this particular, in order to favor the sale of antipyrin, and distinctly state that the above appearance was not more frequently observed than after other anti-febrile agents, far less than after kairin. To call it "aniline poisoning," as has been done, is quite unjust.

The drug was used in twenty-four cases of fever, and always lowered the temperature. Fifteen grains given in the morning is the favorite daily dose with Drs. Cahn and Hepp. The temperature begins to fall in about an hour, and continued to fall for about three hours longer; it then gradually rose again; as the temperature fell, the skin reddened, and there was perspiration; the pulse became less frequent, and the arterial tension was increased. In some cases, during the period of intermission, there was much thirst, followed by increased urination and gentle sleep.

A further series of cases, sixty in number, included twenty-nine of typhoid fever, six of erysipelas, two of croupous pneumonia, four of acute rheumatism, six of phthisis, two of pleurisy, two of pyæmia, and two of septicæmia. Liebermeister has taught us that quinine is more energetic in its effects if given coincidently with the natural daily remission in fevers, and this is also the case with antifebrin. A dose given early in the day has a far more potent effect than if given in the evening. A good dose at one time is far better than small doses frequently repeated, and in high fever the latter treatment is useless at first. But, if the temperature be brought to the normal by a good daily dose (fifteen grains) for two or three days consecutively, it will be found that small doses of two or three grains daily often suffice to keep it low afterward.

As to the limit permissible, the authors themselves repeatedly took one or two grammes a day without the least effect; and one young man, who was suffering from diarrhœa, took three grammes (forty-six grains) daily for a week without the least discomfort. Indeed, Fürbringer and Reise raised the dose boldly to over ninety grains daily without harm — a dose certainly equivalent to five drams of antipyrin. Thus there is no cause for disquietude with the moderate doses recommended, but it is always advisable to study the individual susceptibility.

But one of the chief advantages of antifebrin over antipyrin is the freedom from vomiting after it, and patients who usually had retching or even vomiting

attacks after antipyrin, took antifebrin without any discomfort. No irritation of the urinary passages was observed; in some cases of albuminuria, the albumen disappeared during the use of the drug, in others not till the patient was free from fever. Again, shivering was rarely seen after antifebrin, whereas it is a common result after antipyrin. The subsequent rise of temperature is often temporarily higher than the normal elevation, but this is a common result after all energetic agents on the temperature; especially after the use of dioxybenzols in general, for example, resorcin, kairin, and particularly thallin; also after antipyrin, and even after cold baths.

The patients feel much better after antifebrin, and the mind is cleared to a remarkable extent. This is best noticed in typhoid cases.

Another advantage of antifebrin is the rise of arterial tension, together with lessened frequency of the pulse. Even when directly injected into the veins of animals, antifebrin never causes lowering of the arterial tension. This was established by experiments in Professor Schmiedeberg's laboratory. At the same time the increased diuresis caused by antifebrin is distinct evidence of its favorable effect upon the circulation.

No specific action of this drug is claimed as against any disease in particular; the chief experience of Cahn and Hepp related to typhoid.

From all this it appears that, as said above, antifebrin is evidently a powerful antifebrile agent worthy of further trial. It is no doubt unfortunately true that the action of these aniline derivatives is of a more or less evanescent character, but this may be compensated to a great extent by giving them in appropriate repeated doses. It may be added that Lépine (*Semaine Médicale*, 1886, p. 473), calls this agent a "nervine," and finds that it relieves the peculiar pains in "tabid" subjects.

IV. GENERAL MEDICINE.

Refrigerant and Rheumatic Diseases.

In the course of a paper on Rheumatism, says *The Lancet*, read at the recent Berlin Congress of Naturalists and Physicians, Professor SENATOR, who adduced evidence to prove that rheumatism is a specific disease, made some remarks upon the popular acceptation of exposure to cold being a cause of disease (*Deutsch. Med. Woch.*, No. 41). He said that undoubtedly many painful affections of the locomotor system, many neuralgiæ and paralyses—*e. g.*, facial—arise from sudden exposure to cold, especially if the surface be heated and bathed in sweat. But the term "cold" should only be applied to cases where the history of such exposure was quite clear, and the diseases produced thereby should be termed "refrigerant" rather than "rheumatic." The use of the words "rheumatism" and "rheumatic" should then be reserved for such cases of disease as are not due to mere cold, but to a special kind of miasmatic infection, like that which excites acute rheumatism—the prototype of rheumatic disease—and are amenable to specific treatment.

Stimulants as Retarding Digestion.

A correspondent writes in the *British Medical Journal:* The extended consumption of one or the other of this class of substances points to the existence of some beneficial effect to be derived therefrom, although what this consisted in it has been difficult to say, judging otherwise than subjectively. SIR WILLIAM ROBERTS, of Manchester, has lately suggested an ingenious hypothesis, which offers a plausible explanation of their use. Man, in a state of nature, would derive his sustenance presumably from materials which, from their being raw, or at any rate imperfectly cooked, would be necessarily but slowly digested and assimilated. With civilized communities, on the contrary, everything is done with the view of facilitating digestion, by the removal of indigestible parts of the food, or by submitting them to processes which favor the action of the juices with which they are to be brought into contact. Under these circumstances, it is quite possible that digestion and assimilation may proceed at a speed not only unnecessary, but even disturbing to the equilibrium of the organism, and provocative of waste. The employment of alcohol, tea, coffee, etc., would tend to correct this undesirable acceleration of the assimilative processes; for Sir W. Roberts has proved, by a series of carefully-conducted experiments, that their effect is powerfully to retard the action of the various digestive ferments on the foods; and it may be that the instictive sense of the benefit thereby derived lies at the root of the yearning of all civilized nations for such substances. Again, some condiment, such as common salt, is added to restore sapidity to articles from

which the salts have been removed in the process of cooking; and taken in excess, it only throws extra work on the organs of excretion.

Cultivation of Bacillus Tuberculosis.

At a recent meeting of the Paris Biological Society, M. NOCARD stated that the researches which he had made in connection with M. Roux showed that ordinary broth, gelatinized with gelatin or with glucose, was one of the best media for the cultivation of the bacillus tuberculosis, if from 6 to 10 per cent. of glycerine be added to the broth. It was much superior to gelatinized blood, recommended by Koch, and was much superior even to serum with peptone and sugar, which was recommended last year by M. Nocard. The cultivations were not only richer and more abundant, but they developed much more rapidly, eight days being sufficient to produce a very thick layer of micro-organisms. The tubercle-bacillus may be cultivated under these conditions not only in a liquid, but also in a solid medium. MM. Nocard and Roux's discovery is not only of considerable theoretical interest, but also of great great practical importance. It is well known how uncertain was the cultivation of tubercle-bacilli in serum, and how long a time it took to obtain a result. This made experimental researches on this micro-organism, from a pathological point of view, almost impossible; but with this new medium of cultivation they become easy, and investigators may undertake researches that were before impossible, especially as, in a medium solidified with gelatine or gelose, they will be able to isolate the tubercle-bacillus from others that may be present in the same substance.

The Vertigo of the Kajak.

M. HASTRUP, a physician of North Greenland, has observed a curious affection that attacks the Esquimaux. Its name in the Esquimaux vernacular is the equivalent of our term "boat-fright;" but Danish physicians call it "Svimmelhed i Kajak," or vertigo of the kajak (*Hospitals Tidende*, August 18, 1886, *Rev. internat. des Sc. méd.*, September, 1886.

The disorder is described as follows: An Esquimaux while sailing in his kajak upon a perfectly calm, smooth sea, is suddenly seized with a feeling that his boat is tipping to one side. He jumps to the other side to preserve the equilibrium, but this only makes matters worse, and he abandons himself to anxious and even frenzied attempts to keep the boat from tipping. He can no longer fish, and his trouble does not cease until he gets in sight of shore or of another boat. These attacks are not accompanied or preceded by any malaise or nausea. There do not appear to be true vertiginous sensations, but there is rather a hallucination of the sense of equilibration. The disorder attacks the Esquimaux when they are apparently in full health, and it is not accompanied with headaches, tinnitus, palpitations, convulsions or paralyses. It may last a lifetime, or go away as it comes, quite suddenly. It is a great misfortune to the patient, since he can no longer fish, and is practically an unproductive member of society. The disease has been attributed to the excessive use of coffee and tobacco, but M. Hastrup has observed it in men who used neither of these substances.

The Prophylaxis of Venereal Diseases.

In an address delivered before a meeting of hygienists, in Barcelona, Dr. Louis Cortés took up the subject of the prevention of venereal diseases, briefly referring to the measures best suited to diminish the chances of contagion in impure congress (*Gazeta Médica Catalana*, Nos. 11 and 12, 1886). Quoting an old Spanish proverb which says that "the best thing in dice is not to throw them," the speaker urged upon his hearers the duty which lay upon them of warning young men of the danger which they incurred from sexual intercourse with prostitutes; they should be told concerning the consequences of such acts, and should be urged not to risk their health and even their life for the sake of a passing fancy. But, recognizing that such advice would seldom be listened to, Dr. Cortés proceeded to discuss the means which ought to be adopted for the prevention of disease. The essential of all such measures is cleanliness. The woman should wash herself carefully and should use the vaginal syringe thoroughly before each sexual act, and the mistress of the house should be compelled to provide facilities for their proper performance on the part of her pupils. Pure water, or that which has been rendered mildly antiseptic, may be used, and the injection should each time be continued until the returning fluid is absolutely limpid and clean. Venus should be adored only at the moment that she is rising from the water. As for the man, he should remember the Salernian aphorism: *Post coitum si mingas, apte servabis urethram*, and he should also take the precaution to direct a fine stream of water against the meatus immediately after the completion of the sexual act, in order to remove any impure matter which may have become lodged at the orifice of the urethra. The woman should also practise the ablutions above referred to immediately after sexual intercourse, in order to remove any materies contagii before it has had time to penetrate into the submucous tissues. Neither party should think of performing the act if there exist the slightest abrasion on any part of the genital organs, that is, of course, provided that the existence of such abrasion is known. The man should also examine his partner, as far as can be done without brutality, for evidences of syphilitic taint. One of the most evident and easily discoverable signs of such infection is the presence of enlarged cervical glands. These may be felt by passing the hand lightly along the sides of the neck and behind the ears, which may easily be done without exciting the woman's suspicions. If enlarged glands are felt in this region, there is no safety in anything but abstinence. A precaution which may be of service is to smear the glans with cold cream or vaseline. In conclusion, the author of the address recalled the precept of the celebrated Nicholas Massa: *Si vero quis cum infecta muliere coire voluerit, quod fatuum est, non moretur in coitu.*

The Analogy Between Croup and Asthma.

Before the Harveian Society of London, Dr. Morton read a paper on this subject, the object of which was to compare stridulous laryngitis—to which he gave reasons for thinking the name of croup should be confined—and to "spasmodic" asthma, with a view to their mutual elucidation. He called attention to the resemblance in the sudden nocturnal invasion, the diurnal remissions and occurrences for two, three, or more nights the liability to repeated attacks, the greater prevalence in the male sex, the dry early and moist later stages, the cessation of

the liability to croup, as the beginning of that to asthma at about 6 years of age, the frequent origin of both in slight catarrhal or dyspeptic disorder, the common occurrence of both in summer as well as winter. All these peculiarities showed that croup could not be a real laryngitis, with paralysis, according to the commonly accepted pathology, but a paroxysmal dyspnœa from disturbed innervation of the larynx, as asthma was of the bronchi. This left it open whether the disturbance was motor or trophic. Sir Andrew Clark's hypothesis of quasi-erectile swellings of the mucous membrane afforded as complete and adequate an explanation of croup as it did of asthma. It was further suggested for inquiry whether hay-fever, croup, and asthma migh not be different expressions of the same state, forming really one and the same disease. Dr. Charles West observed that children who had been subjects of croup or stridulous laryngitis in their earlier years, were prone to suffer from true asthma in later life. The child-asthma, as a rule, ceased almost entirely before puberty, and this point should be especially borne in mind by practitioners, since it was possible that the rule might not hold good in cases where the general health of the child was not carefully maintained. Croup was essentially spasmodic in its nature, but was frequently caused by sudden variations of temperature, by attacks of slight catarrh, and by errors in diet. In croup the phenomena were those of spasm and something else; in laryngismus stridulus the spasm was the principal feature, a distinctive difference being formed by the catarrhal signs in the former. He thought that for the present it would be advisable to retain the term stridulous laryngitis, as he could not altogether renounce the view that some form of congestion or inflammation of the larynx was generally associated with it.

Dr. GOODHART referred to the replacement of croup and stridulous laryngitis by asthma in later life, and inquired whether any corresponding replacement occurred in the case of child-asthma after its subsidence at the period of puberty.

Dr. HUGHLINGS JACKSON, after remarking on the great value of Dr. Morton's paper, spoke of laryngismus stridulus, and also of convulsions in cases of spasmodic laryngitis. He believed that these fits, and probably the fits occurring in pneumonia and other acute diseases of children, were owing to discharges beginning in parts of the medulla oblongata or pons Varolii; in other words, they were dependent on discharges beginning in parts on the lowest level of evolution, which was pretty much the "true spinal system" of Marshall Hall. He thought it a matter of great importance to note the mode of onset, and the march of the convulsions in those cases, as carefully as most people now did in cases of epileptiform seizures originating from the middle level of evolution (the so-called motor region), and as they ought to do in cases of epilepsy proper, dependent, as the speaker believed, upon discharges from the highest level of evolution. Bearing in mind Victor Horsley's researches, they should, among other things, carefully note the nature, tonic or clonic, of the spasm in the different regions affected in the convulsions of children. He stated again an hypothesis he had put forward regarding the convulsions of laryngismus stridulus (*Brain*, April, 1886). He thought they were owing to discharges beginning in the respiratory centres determined by supervenosity of the blood,—by an excess of their natural stimulus. That convulsions could be produced in some lower animals by inducing supervenosity, and by rapid bleeding, was well known; in these cases the

convulsion was respiratory, and was probably owing to absence of oxygen. According to Kussmaul and Tenner, convulsions in rabbits were producible by rapid bleeding when the cerebrum proper was taken away. Laryngismus stridulus occurred in children at an age when the respiratory apparatus was imperfectly developed, and most often in those who from rickets had soft ribs; moreover, the attacks usually came on during sleep, when respiration was less active; these were conditions favoring supervenosity. The good effects of fresh air, country air and cold sponging, were in favor of this hypothesis; moreover, some authorities praised highly musk and belladonna, which drugs were respiratory stimulants. Spasmodic asthma in the child and adult was, he supposed, a respiratory convulsion, owing to discharge of imperfect (? small) respiratory centres from supervenosity.

Dr. WEST added that both asthma and croup appeared to affect males more frequently than females, while in other nervous affections, such as chorea, the frequency was exactly reversed. He did not recollect any instance of neurosis in after-life succeeding to child-asthma; nor could he remember any case in which general convulsions occurred during stridulous laryngitis. In laryngismus stridulus the convulsive movements were almost always confined to the limbs.

The Transmission of Yellow Fever by Mosquitoes.

The *Jour. Am. Med. Ass.* says: In the *American Journal of the Medical Sciences*, of October, 1886, is a most interesting article on this subject by Dr. Charles Finlay, of Havana, who is already known to the readers of Spanish medical literature as having contributed some interesting articles on subjects connected with yellow fever. Five years ago he put forward the view that whereas yellow fever is not spontaneously transmissible by infection through the air nor by contact, it can be communicated by inoculation; and in searching for a natural agent capable of communicating the disease by inoculation, he fixed upon the Culex mosquito, which is common in Havana, as the most likely agent. This insect has also been described as the Culex fasciatus. "Although great differences are observed in the duration of the successive phases of the development of the Culex, the following may be taken as a fair average: Every mosquito that stings may be considered as a fecundated female, and will probably lay eggs within a few days after its bite, provided it can find water upon which to lay them. In water-jugs standing in bedrooms, the insect is often found depositing its eggs either on the sides of the jug or upon the water. The eggs are commonly hatched, producing minute wrigglers, between the second and fourth day, in summer; some are delayed much longer, and those that are deposited outside the water may remain a long time in the dry state without their losing their vitality. The wrigglers grow more or less rapidly according to the nutritive material contained in the water, the temperature, etc., but they probably pass into the pupa stage within twelve or fourteen days. This stage is always short, not lasting more than two or three days, the fully developed mosquito emerging from its aquatic case a fortnight or three weeks after the egg was laid." This much natural history seems necessary to a proper understanding of how one infected mosquito conveyed to a healthy place, if the temperature and altitude be suitable, might, on Dr. Finlay's theory, inoculate the disease on a healthy subject who

might be bitten by it, "and, according to the usual rate of incubation, at the end of a fortnight or three weeks, the consequent attack of yellow fever would be at its height. In the meantime the imported insect would have produced a whole brood of its own species, probably in the vicinity of the place where the patient is lying; thus providing the necessary conditions for the subsequent propagation of the disease."

From careful investigations and experiments, Dr. FINLAY finds that the insect under consideration, when suddenly transported to heights above 3,000 or 4,000 feet, must find it difficult to exert its functions, and that it would never, of its own accord, seek elevations which render its flight difficult. From his experiments he finds it probable that the limits of functional activity for this insect (the Culex fasciatus) are: as regards temperature, between 60° and 100° F., though it will revive after having been chilled to 32°, or warmed to 105° F.; as regards altitude, from the level of the sea to 3,000 or 4,000 feet. "Now the limits which most observers assign to the propagation of yellow fever are temperatures ranging from 60° to 90° F. ('Barton's Reports,' 1852, pp. xiii and 283); a general temperature of 32° F. having, however, proved ineffectual to prevent the recurrence of the disease (in the case of the 'Plymouth'), when a tropical temperature was produced. As regards altitudes, the highest limit at which it has been observed seems to be 400 feet above the level of the sea." There are some mosquitoes which are entirely nocturnal, and these necessarily lead a more stationary existence than those which come out in the day, as the latter often have to follow an intended victim from the house, or to some distance, in order to accomplish their object. When it succeeds in stinging a person, it will generally take up its quarters at that place, as its digestive act may require two days or more, and will there lay its eggs.

For a further comprehension of this subject, it is well to say that the sting of the Culex mosquito is a slender hollow needle from $\frac{1}{75}$ to $\frac{1}{50}$ mm. broad and 2 mm. long, with its sides roughened by a series of transverse ridges and its point armed with teeth. "This needle penetrates through the skin until it reaches one of the capillaries of the corium, generally to the depth of 1 to 2 mm., remains in position during a space of from one to five minutes, and, after being withdrawn, will continue protected by its sheath until the insect's next bite. I have been able to prove that the sting often retains spores of microscopical fungi, which may be made to develop by keeping the proboscis in a sterilized cell, and I once found upon the side of the sting a finely-developed bunch of spores like those observed in yellow fever blood cultures by Dr. Sternberg . . . whence it is to be inferred that it may likewise retain upon its outer surface or inside of its sheath, such minute disease germs as are generally believed to occasion most of the zymotic diseases. If so, the sting of the mosquito having been impregnated with the animal juices during the operation of stinging, may constitute an appropriate soil for the preservation or even for the culture of those germs; might it not, indeed, be the 'intermediate host' necessary for some phase of their development?"

Dr. FINLAY's account of his inoculation experiments is very interesting, and it is to be regretted that he had not more time at his disposal, and more yellow fever patients and mosquitoes—for, strange as it may appear, the two last are

not always to be readily obtained at the same time, even in Havana. Twenty-four persons have been inoculated by him since June, 1881. One of these has died of yellow fever: he was inoculated in November, 1883, without any visible result, and was attacked in June, 1884, with a malignant form, which was the result of contagion. Two of those inoculated left the country and were lost sight of the first summer after the inoculation. Twenty-one remained under observation for from one to four full summers. Six were followed, within from five to twenty-two days, by an attack of fever, the exact counterpart of mild attacks of yellow fever, and which were proved afterwards, by observation, to have conferred immunity. Eleven inoculations, though not followed by morbid manifestations within the limits of incubation, appear likewise to have conferred immunity. In four cases, not followed by immediate manifestations, a mild attack of yellow fever was observed at the end of several months. It is upon the six successful cases that he relies in order to prove the aptitude of the Culex mosquito for transmitting yellow fever. "If this be once admitted, it must follow that the disease is actually so transmitted, since it must constantly happen, in a place like Havana, that unacclimated subjects are stung by mosquitoes which have previously bitten yellow fever patients." Dr. FINLAY concludes that while yellow fever is incapable of propagation by its own unaided efforts, it may be artificially communicated by inoculation, and only becomes epidemic when such inoculations can be verified by some external agent, such as the mosquito. A careful study of the habits and natural history of the mosquito shows a remarkable agreement with the circumstances that impede or favor the transmission of yellow fever. From Dr. FINLAY'S observations and information, the disease is incapable of propagation wherever tropical mosquitoes do not or are not likely to exist, ceasing to be epidemic at the same limits of temperature and altitude which are incompatible with the functional activity of this insect; and it spreads readily wherever they abound. Hence he thinks it may be inferred that these insects are the habitual means or agents of its transmission; though, of course, there may be other factors. It is at least a remarkable coincidence, if nothing more, that in the summer of 1885 mosquitoes, especially the diurnal species, were scarce in Havana, but became more numerous during the autumn months; and there was a remarkable scarcity of yellow fever cases during the summer months, which were unusually hot, but the cases became more numerous in October and November, in which the weather was rather mild. Dr. Finlay's paper is worthy of great attention, especially in view of the proposed Yellow Fever Commission, which, it is to be hoped, will thoroughly investigate the subject.

V. CLINICAL MEDICINE.

Potion Used in Diabetic Thirst.

DUCHENNE (*Les Noveaux Remèdes*) gives the following formula as of value in the treatment of the excessive thirst of diabetic patients:

Potassium phosphate	2 parts.
Water	75 "

A teaspoonful of this solution is given twice or thrice daily, in a little wine or hop tea.

Pulmonary Tuberculosis Treated by Inhalations of Hydrofluoric Acid.

SEILER (*Le Prog. Méd.*) submits his patients to daily inhalations of an hour's duration, and twenty or thirty in number. He saturates the air by a spray apparatus, which contains a mixture of the acid and water, in the proportion of one to three. This air is forced into the inhaling room in the proportion of about ten meters to a cubic meter. The inhalations are absolutely innocuous, and, he affirms, of notable benefit.

Persistent Constipation.

In the *Lancet*, December 1885, Mr. DAVIES, M.B., suggests the following treatment in cases of persistent constipation:

℞.	Ext. cascaræ. sagrad. liq.	ʒj.
	Tinct. nux vomic	♏x.
	Tinct. bellad	♏v.

To be taken every night and morning, together with friction to the abdominal walls for a few minutes every morning. The diet to consist of porridge, brown bread, stewed fruit, with entire abstinence from tea. After a few days the medicine can be reduced in quantity, and, as a rule, the bowels act regularly after two or three weeks.

Treatment of Eczema.

Prof. WIDERHOFER (Vienna) has flannel washed in soap and water until it is filled with lather, and with this rubs off the parts affected by the eczematous eruption. A piece of linen is then smeared with a five per cent. bismuth salve (lanoline 50, subnitrate of bismuth 2.5 parts), and with this the parts are dressed morning and evening.

Lanolin salve, according to Widerhofer, is an excellent treatment of eczema in children. It is more easily borne by the skin, because it forms fatty acids

very slowly, while the other fats and vaseline form fatty acids very readily where they come in contact with the skin; and the skin of children is very sensitive to the irritation of fatty acids.

Pyridine in Asthma.

The *Quarterly Therapeutic Review* contains the following extract from the *Union Medicale:* "Pyridine is valuable as an anti-asthmatic, whether the affection is of cardiac origin, or otherwise. About a dram of the drug is placed on a plate in a small room, to which the patient pays periodical visits of from twenty to thirty minutes' duration three times a day. After two or three *séances* the râles in the chest disappear, the expectoration is more free, and sleep is obtained at night, or, at all events, relief from the asthmatic attacks. In some cases the improvement is permanent, in others it only lasts unimpaired for five or six days. Iodine treatment is then required, which is usually efficacious, but which can not be borne by all patients."

Nodosities of the Second Phalangeal Articulation as a Sign of Dilatation of the Stomach.

BOUCHARD, at the Lariboisière Hospital in Paris, has observed in about a fourth part of four hundred cases of dilatation of the stomach, and more frequently in men than in women, a lateral projection on the internal, external or dorsal aspect of the second phalangeal articulation, whereas the terminal phalanx is of normal dimensions—the reverse of the condition in phthisis. These so-called "Bouchard's Nodosities," as they are termed in France, where many of course agree with Bouchard, have—it is said—often enabled that observer to diagnosticate dilatation of the stomach, the existence of which he has afterwards been able to confirm by the usual physical signs.

Absence of Patellar-Tendon Reflex in Diabetes.

Last week a patient of mine, says Dr. BROWN (*Brit. Med. Jour.*), died of diabetes mellitus. His age was 30, and he had suffered for over four years. In addition to the ordinary symptoms of the disease, there was absence of the knee-jerk in both legs, which Dr. Raven referred to in his case. It had not returned five weeks before his death. In addition, there were other symptoms which point to the neurogenic origin of the disease; namely, girdle-sensation at the level of the epigastrium, asthenopia, unequal pupils (a few days before death, they were equal), darting pains in both legs, aed *tache cérébrale* well marked in the arms, but in the legs absent. Two days after this, vaso-motor irritability was well marked in both legs, due, I believe, to the application of hot-water bottles to the feet, which had increased the cutaneous circulation.

Neuralgia of the Testicle and its Relations with Hysteria in the Male.

Testicular neuralgia may be consecutive to injury of the organ or to some lesion, such as hydrocele, or it may be idiopathic. In the latter case it is almost invariably accompanied by signs of hysteria, and may become the starting-point of convulsions and other phenomena. M. TERRILLON related four cases from his

wards at the Salpêtrière. In one of the patients, ordinarily of an irritable nature, the attack came on suddenly during an effort, the pain was intolerable, and topical treatment was not followed by any relief. Under anti-hysterical treatment, douches, etc., however, some improvement took place. M. Bouilly quoted two cases of testicular neuralgia, where the suffering was less severe than in M. Terrillon's case, and yielded to alkaline medicines, given to correct the extreme acidity of the urine.

Treatment of Typhoid Fever.

Dr. F. Peyre Porcher, of Charleston, gives the following formula for a "fever mixture:"

Spirit of nitrous ether	½ oz.
Potassium acetate	1 or 2 drachms.
Potassium chlorate	1 drachm.
Solution of ammonium acetate	1 oz.
Tincture of aconite	½ drachm.
Camphorated tincture of opium	2 or 3 drachms.
Water	to 4 oz.

A dessertspoonful to be taken every two or three hours as long as there is fever. Potassium bromide or morphine may be added if there is great restlessness or want of sleep.

A Case of Mistaken Diagnosis.

A writer in the *Revue Internationale des Sciences Médicales* relates that he was called in haste one day to remove a chestnut from the œsophagus of a child aged eighteen months. The infant was screaming, and seemed to be suffering greatly. Examination of the mouth and neck showed nothing abnormal, and a sound introduced into the œsphagus passed readily into the stomach. It was supposed that the chestnut had passed into the stomach. On a visit made the next morning, a large burn was seen on the child's hand, and the case was then clear. The baby had been playing with the nut alongside of a stove, had burned itself, had lost its chestnut, and its loud cries led the mother to believe that the plaything was lodged in the throat. The case emphasizes the necessity of a careful examination of a child suffering pain, and of not allowing a preconceived judgment to interfere with such examination.

Double Pneumonia Treated with Pilocarpine.

A man æt. 18, (*Memorabilien*, Hft. 4, 1886,) who had been greatly broken down with dysentery complicated with nephritis, suddenly acquired a double pneumonia. Antipyretics, expectorants, etc., resulted simply in a fresh lighting up of the dysentery. As in this way the organs of secretion as well as those that regenerate the blood became unfit for their work, uræmia and asphyxia combined threatened to set in, and to combat at least one of these dangers, recourse was had daily to hypodermic injections of 0.1 gm. of pilocarpine. Thanks to the profuse perspiration and the salivation, purification of the blood was in this wise obtained until the lungs were again able to do their work. Improvement became more pronounced after every injection, and patient recovered in a very short

time. With like good effect this drug was used in the case of an old lady sick with broncho-pneumonia, with intense dyspnœa.

Passage of a Large Foreign Body Through the Alimentary Canal of an Infant.

The following case may be interesting to your readers, says Dr. C. D. Stewart (*Brit. Med. Jour.*): A child barely two months old, had, through the playfulness of an older one, got introduced into its mouth, and swallowed, a large heavy nail, fully three inches long. The parents did not call in medical assistance till they discovered the nail in a dejection. On inquiry it was elicited that during the period between the swallowing and the passing of the nail, that is to say for nine days, the child had shown no deviation from normal health. The case is interesting as showing how such a large body could pass through the primæ viæ of so young a child, without giving rise to the slightest symptom to indicate its presence and passage.

Urinary Incontinence of Children Treated by Suppositories.

Dr. E. T. Williams (*Boston Medical and Surgical Journal*) says: Morphine alone relieves for the time being, but does not cure. Belladonna and atropia are curative, when continued long enough, though better borne in combination with a little morphine, which counteracts some of their bad effects, and enables them to be given more continuously. The requisite dose of belladonna is smaller when combined with morphine. When these medicines produce headache or nervous excitability, I use the bromides as a corrective, or suspend their administration for a time. I have found no case where they could not be borne when properly given. A fifteen-grain suppository of cacao butter should contain, for a child five years old, one-eighth of a grain of belladonna extract and one-sixteenth grain of morphine; but the doses must be carefully adapted to the particular case in hand, beginning with a small dose, with a smaller relative proportion of belladonna, and increasing the latter and diminishing the morphine as toleration becomes established.

Pernicious Anæmia and Bothriocephalus Latus.

Dr. Runeberg, of Helsingfors, speaking at the Berlin Congress (*Wiener Med-Blätter*, September 30, 1886) about the relations existing between pernicious anæmia and intestinal parasites, remarked that he had found bothriocephalus latus to have been the cause of numerous cases of pernicious anæmia observed in Finland. After removal of the worm, the affection previously apparently incurable, disappeared spontaneously. Of nineteen cases of pernicious anæmia treated at the University Clinics of Helsingfors, Runeberg could trace twelve to the presence of the parasite. From 1878 to 1883—when the anthelmintic medication was introduced at the clinics—Runeberg lost nine cases of pernicious anæmia, while after that period of nineteen cases treated, only one died. Runeberg advances the opinion that even other intestinal parasites, which were hitherto regarded as harmless, could produce similar results. Reyher has confirmed the observations of Runeberg, and published a pertinent paper some time ago in the *Deutsche Archiv für Kl. Med.*

Consumption Among the Indians.

Progress says, speaking of consumption among the Indians, WASHINGTON MATTHEWS, M. D., Surgeon United States Army, says: "My first experience with the Indians, including a period of twenty-one years, was among some of the wildest tribes then existing, many of them prosperous, well nourished, dwelling in the heart of the buffalo range, in the healthful climate of the Upper Missouri and Yellowstone Valleys. I was astonished to find such a disease as consumption among these people, and still more so to find it of frequent occurrence. My opportunities have been such as to convince me that consumption increases as attempts are made to civilize the Indians."

From the records of the United States Census Bureau it may readily be established that the older settled districts of the United States rank very nearly as high in point of mortality from tuberculosis as the more popular health resorts. Such observations will dampen the ardor of the advocates of the high mountain ranges of the West, or, in fact, of any other climatic resort for consumptives.

Treatment of Diphtheritic Angina.

DR. H. ROGER and PROF. PETER, of Paris, give, in *Les Nouveaux Remèdes* of August 1, 1886, the following therapeutic hints in diphtheritic angina: In the benign form give in the beginning an ipecac emetic (3 to 12 grains of powdered ipecac in an ounce of the syrup of ipecac in tablespoonful doses) every five minutes, until emesis is produced. Apply locally twice a day lime-water, of a solution of borax or alum, or, finally, lemon-juice. In grave cases repeat the emetic once or twice, apply four to eight times daily saturated lime-water, and touch the fauces with a solution of caustic soda (caustic soda and glycerin), or with a solution of nitrate of silver (nitrate of silver, 15 grains; water, 1 ounce). In the former case the patient ought to rinse the mouth with vinegar and water; in the second case, with salt water. In both light and severe cases tonics and supporting nutriments (bouillon, beef-tea, and milk) should be freely given.

During convalescence the authors advise change of air, continuance of the supporting alimentation, and wine of cinchona. In remaining diphtheritic paralysis the electric current is to be resorted to.

The "Sleeping Disease."

The singular and invariably fatal malady (says the *Med. Press*) called *lethargus*, is peculiar to the negroes on the western coast of Africa. The only symptom is said to be an uncontrollable tendency to somnolence, which continues for about three weeks, when the victim usually dies. The sleep is natural in appearance, and the patient can be roused to take nourishment, but at once returns to his former condition. The pulse, respiration, and temperature remain normal throughout. Nothing characteristic has been found post mortem. In the absence of evidence to the contrary, we are at liberty to suppose that the malady in question may be an aggravated form of one not unknown in our own clime. The number of people who can be "roused to take nourishment," but who can find time for very little else, is very great, and the diagnosis here is rendered more difficult by the fact that one never gets a chance of examining the state of these

patients' viscera, except by means of their *dejecta*. The complaint in this country is subject to exacerbations which come on at about the usual time for getting up, but lessen in intensity towards lunch-time.

Precocious Syphilitic Renal Disorders.

Dr. Mauriac states in the *Archives de Médecine*, that like the brain and bones, the kidneys may be affected very early in the course of syphilis. How it acts at this early stage (within two months of the appearance of the chancre) is difficult to determine, on account of the small number of autopsies available. The process is probably one producing parenchymatous nephritis. As is well-known, in the later stages it is sclerosis and waxy degeneration that are seen. The symptoms are insidious, and it is only when œdema of the eyelids, or of other portions of the body, manifests itself, that suspicion is aroused. The symptoms and effects seen in ordinary parenchymatous nephritis are also seen in this form. There is, however, a marked difference in the effects following treatment. In the form due to syphilis, marked amelioration, attended by increased diminution in the quantity of albumen, follows specific treatment. The mixed treatment is perhaps the best; but, if mercury is not well borne, recourse must be had to large doses of the iodide of potassium, accompanied with the exhibition of mercury in a manner that will be tolerated by the patient, such as by hypodermic injection.

Salicylic Acid in Diphtheritic Coryza.

Dr. Domingo Gonzalez has employed salicylic acid with excellent results in diphtheria with invasion of the nasal mucous membrane (*Gaceta Médica Catalana*, September 15, 1886). The following are the conclusions which he formulates concerning the treatment of this affection:

1. Diphtheria is a local disease, always grave, but often curable if energetic local treatment be employed from the first.

2. Cauterization with nitrate of silver in strong solution, or with hydrochloric acid, is the treatment from which the best results may be expected.

3. When diphtheria invades the nasal fossæ, cauterization of the affected parts being no longer possible, treatment must be limited to the local application, by either insufflation or irrigation, of antiseptics.

4. Among the agents comprised in this category, salicylic acid is the most efficacious, since, in addition to its properties as an acid, it is a powerful antiseptic, and is devoid of toxic effects.

5. Spraying the parts with a four per cent. solution of chlorate of potassium and borate of sodium is a valuable aid to the treatment by salicylic acid.

Santal in Renal Colic.

The *Journal de Médecine* publishes the following note by Dr. Philbert on the use of santal in nephritic colic:

Having already suffered from this painful disease, the author resolved to try the above remedy upon himself. An opportunity soon presented itself. Towards the end of March, about 4 o'clock in the afternoon, he experienced the usual symptoms, and hurried home as quickly as possible. He took four capsules of santal, and got into a bath. The pain was much less severe than usual,

and did not last so long; in about an hour it ceased entirely. Dr. Philbert attributes this result in great measure to the santal, whilst allowing that the bath also did good. For six months he had no occasion to renew his experiment. At the end of that time he was again seized with frequent and imperious desire to pass water. Having no doubt as to the diagnosis, he immediately took four capsules of santal, and awaited the onset of the familiar pain in the kidneys. It did not come on, however, and nothing but a "stitch" in the left lumbar region made him aware that the calculus was passing off on that side. Dr. Philbert does not undertake to explain the mode of action of the santal in this case; he is content with pointing out its beneficial effects.

On Dyslexie.

Dyslexie has been observed by BERLIN in six patients. (*Archives Générales de Médecine*, November, 1886.) It is a symptom characterized by the impossibility of reading more than three, four, or five consecutive words. The subjects of this affection read the words correctly whatever the size of the print may be, but they cannot continue reading. They stop for an instant, and then resume, but with the same want of success. They have no affection of speech, they pronounce clearly words pronounced to them, and their intelligence is retained. Dyslexie has nothing in common with the visual hebetude of the ophthalmologists, for it is not accompanied by any ocular trouble. In reality it is a variety of aphasia, and more precisely it is an incomplete and definite verbal blindness. The condition comes on generally suddenly, with various cerebral symptoms, which leave no doubt regarding its anatomical substratum. The author seeks for lesion in the left hemisphere. He has had four autopsies. In one case he found a softening of the gray matter in the inferior parietal lobule. In the others the area of softening was not localized so precisely. The author has always found important alterations in the cerebral arteries. It always indicates a grave cerebral lesion going on rapidly to death.

Macro-Glossia.

Before an English Medical Society, Mr. FRANCIS read the notes of a case of macro-glossia, which had been under the care of Professor Humphry in Addenbrooke's Hospital. W. M., male, aged 5 months, was admitted on September 1st, 1886. The tongue was too large at birth, and had been gradually increasing in size ever since; the protruded part measuring 1¼ inches long in the middle line, and 1½ inches broad at the base, and being symmetrically enlarged in all its dimensions. There were two deep antero-posterior furrows on the surface, parallel with the edges of the tongue, and meeting just behind the tip. There was no evidence of glossitis, and no hæmorrhages in the mucosa; there were no teeth, no deformity of the lower jaw, no evidence of lymphangiectasis of any description elsewhere, nor any deformities. There was no history of mental disease, nor deformities, nor struma in the family. The child died suddenly, a week after admission; thetemperature, which had been irregular before, suddenly rising to 108° F. There was a little difficulty in swallowing, but no interference with respiration. On microscopic examination it was found that the papillæ were much enlarged, abnormally vascular, and covered with a thick layer of cuticular cells. The sub-

mucous lymphatics were enlarged here and there, and the lymph-canalicular system of the muscle-bundles were espicially dilated, but no cysts or hæmorrhages were seen.

Rag-Sorters' Disease.

MM. SCHULTZ, KRANNHALS, HERBOAVEN, and RADECKI recently communicated to the Medical Society of Riga facts concerning an epidemic which broke out among the female rag-sorters in a paper factory at Ligat. On April 25th, one of them was attacked; on the 28th, seven succumbed to the disorder. The first symptoms were tremors, high temperature, and general *malaise*. There was loss of appetite, headache, dyspnœa, weak pulse, and cough accompanied by moderate expectoration. When the disorder proved fatal, the temperature fell, the pulse became weaker, and cyanosis and collapse ensued. *Post-mortem* examination showed rapid decomposition of the tissues, with mediastinal, pleural, and pericardial effusion, and enlargement of the bronchial glands and the spleen. M. Krannhals studied these lesions from a histological point of view, and discovered microbes of three different kinds in the blood—some like the bacilli described by Koch as occurring in œdema, some arranged in rows, and others having the appearance of cocci. The microbes were most numerous in the parenchyma of the lungs, in the bronchial tubes, and in the cellular tissue of the mediastinum. The fluid of the pleural effusion injected under a dog's skin caused malignant œdema and death in three days. Cultivation of these products in agar-agar proved the identity of these micro-organisms with the microbes of malignant œdema as described by Koch and Hesse. M. Krannhals therefore considers that the epidemic described is analogous with malignant œdema.

Case of Suppurative Inflammation of the Thyroid Gland.

M. ROMAIN reports (*Arch. de Médecine et de Pharm. Milit.*, December, 1886) a case of suppurative inflammation of the thyroid gland, resulting in the complete cure of a goitre. A Swiss servant girl, aged 16, of slight build and generally good health, was afflicted with enlargement of both lobes of the thyroid, but principally of the left, which gave to her neck a circumference of 39 centimètres. Tincture of iodine and iodide of potassium had been used to little purpose, when, on October 17, she was attacked with a remittent fever, for which she was admitted into the hospital on the 21st. Under the influence of quinine it subsided in about eight days, but she remained extremely anæmic, with very suspicious respiration at both apices. Arsenic, iron, and tonics were administered with a certain benefit, when an abscess was observed to be forming in the right lobe of the goitre, the whole gland being inflamed. It was opened, and a thread introduced to aid the discharge of the pus with the least possible cicatrization, and carbolized poultices applied. In a few days it was completely evacuated, and the wound closed, when the same process, similarly treated, occurred in the left lobe. During the whole course of the thyroiditis no elevation of the temperature was noticed, and her health continued to improve. Early in January she left perfectly cured of the goitre, in good health, and delighted with the result, the circumference of the neck having been reduced to 32 centimètres. Several months later there was no sign of a return of the affection.

Hysterical Anuria.

In an important work by Dr. Rossoni, on hysterical anuria accompanied by secretion of urine by the stomach, he says that anuria is not a rare symptom in hysteria. This anuria results from a physiological change of the functions of the human organism, the nature of which has not been ascertained. With hysterical patients having anuria, the stomach may be the receptacle of a more or less abundant secretion of a liquid presenting all the physical and chemical properties of urine. Urinary secretion of the stomach may cease and yet not be carried on by the kidneys. Complete anuria may last for two months.

Pilocarpine may in some cases hasten the resumption of renal functions; with some hysterical patients pilocarpine occasions in the salivary glands the secretion of a liquid presenting the same chemical properties as urine. Urea artificially introduced into the circulatory system in cases of hysterical anuria where there is no secretion of urine by the stomach, occasions uremic symptoms. On the contrary, urea may with impunity be introduced in doses of 16 grammes in case of hysterical patients, subject to vomiting urine. There is no analogy between hysterical anuria and uremia in nephritis, or from the absence of the kidneys after nephrotomy, or from ligature of the ureters.

Tannin Treatment of Phthisis.

Drs. Arthaud and Raymond (Paris letter to the *British Medical Journal*) obtained some very remarkable results from tannin. "Six rabbits were treated for a month with doses of tannin, varying from seven and a half to fifteen grains; after two successive inoculations, one with lung tissue from a patient who had died from acute tuberculosis, the other with miliary tubercle from a hospital patient, no trace of infection was observed, while the three other rabbits, to which tannin had not been given, succumbed in consequence of inoculations with the same material. These experiments suggested a mode of treatment which has been adopted with excellent results in over fifty cases. Tannin was given in doses of from thirty to sixty grains a day, and the improvement was visible at the end of a fortnight, the patient had increased in weight, and no relapse occurred. In cases of acute tuberculosis, both in children and adults, it sometimes happens that the symptoms appear less favorable; but at the end of a week or a fortnight the patient's condition improves, even when fatal results have been feared. From these experiments the following conclusions may be drawn: (1) That tannin is preferable to sulphide of carbon or iodoform in the treatment of tuberculosis; (2) that animals submitted to this treatment for a month offer great resistance to the action of tubercular virus."

"Erythromelalgy."

The possibility of what has been spoken of as erythromelalgy being related in some way to a local asphxyia is certainly deserving of consideration. A case of the kind is recorded in *La France Médicale*, No. 14. It is that of a female aged twenty-six, a patient in the Salpêtrière. For eight years she had been subject to hysterical attacks of a classical description. The attacks had diminished in frequency the last two or three years. She had not suffered from an attack for more than three months, when she fatigued herself for several days in succes-

sion, after which she commenced to suffer with headache and hyperæsthesia of the skin, and went to bed in an agitated state. The next day her face was of scarlet hue, her eyes were injected, and she had beatings in the temples and violent palpitations, with severe occipital headache. At the same time she experienced smarting sensations on the back of the hands, and on the inner aspect of the thighs and arms. In a few moments there appeared red patches in the before-mentioned parts of the skin; they were discrete, and looked like erysipelas or scarlatina. The patches were irregular, and not raised at the edges. The red skin was dry, and hotter by 1° C. than the unaffected areas. The erythematous areas were not painful, but were the seats of an insupportable smarting. Their duration was about two hours. Their disappearance was followed by sweating and the passage of a large quantity of urine.

Condiments for the Sick.

The New York *Medical Journal* quotes Dr. W. A. HAMMOND as follows: "It is rarely the case that sufficient attention is given to the use of condiments in the sick-room. They are often altogether excluded, or the patient is allowed to take them at his discretion; whereas much benefit will frequently be obtained by the judicious employment of these important agents. In certain low fevers of typhoid type, and in almost all malarial disorders, condiments may be largely used with advantage. Probably no one of them is more generally efficacious than black pepper. Mustard is also frequently relished, and we all know how grateful to us in our illness a little vinegar has been. In inflammatory affections of the stomach and bowels, the stronger condiments, such as pepper, cayenne, mustard and horse-radish are seldom admissable; but many cases of diarrhœa are very decidedly benefited, especially when they occur in persons who have somewhat run down in general health, by black pepper, cayenne, or mustard, taken in quantities far above those which a healthy person would be likely to ingest. I have frequently known severe cases of diarrhœa to be cut short by a few doses of 20 or 30 grains each of cayenne, taken either in a little water or syrup. Black pepper is well known to be a remedy of no mean power in the common fever and ague of this country. It will often cut short attacks with as much promptness as would large doses of quinine."

Experimental Albuminuria.

SCHREIBER finds (*Arch. f. Exp. Path. u. Pharm.* 1885–6; abstr. by Sabli in *Fortschritte der Medicin*, 1887, No. 2) that albuminuria may be artificially induced by compression of the thorax, the duration of the compression in young subjects needing to be only one minute and a half to produce the effect. The quantity of albumen is variable, but the time during which the albuminuria lasts varies directly with the duration of the compression. In one case hyaline casts, and in another blood-corpuscles, were found in the urine. Schreiber refers the albuminuria under such conditions to stasis of the pulmonary circulation from diminution of the negative thoracic pressure, diminution of the normal difference in pressure between the pulmonary capillaries and left auricle, diminution of the vascular area in the lungs, and corresponding diminution of respiratory changes. In a second paper Schreiber describes the chemical characters of the albumen ex-

creted in these cases, and gives, cardiographic and sphygmographic tracings taken before and during the compression of the chest, which show a slight diminution in the fulness of the peripheral arteries during the practice. Ophthalmoscopical examination did not show any variation in the size of the retinal vessels. These facts rather tend to throw doubt on the explanation of the albuminuria first offered, especially as no dyspnœa, such as would be expected from pulmonary stasis, is produced by the degree of compression sufficient to induce albuminuria.

Different Methods of Treating Cervical Catarrh.

Dr. L'voff of Kazan has reported in the *Meditsinkoe Obozrenie* a number of observations made on the comparative value of different methods of treating catarrh of the cervix uteri. The total number of cases was eighty-two. Of these thirty-six were treated by mechanical scraping of the mucous membrane, eighteen by means of powerful caustic applications, and twenty-eight with weak caustics. The method of applying the weak caustics was, after washing out the vagina with warm water or a solution of boracic acid, to swab the cervical canal with tincture of iodine or with a 10 per cent. solution of chromic acid. This was done once a week, plugs soaked in glycerine of tannin being also used every other day. The strong caustic application consisted of a bougie made of sulphate of zinc and alum fused together. This was allowed to remain in the canal till it had all dissolved, which took place usually in one or two hours. Afterwards the mucous membrane presented a white appearance, due to the eschar. This fell off in five or six days, during which time warm vaginal douches were administered and plugs of glycerine and iodoform inserted every alternate day. In the cases treated by scarification an iodoform the glycerine plug was left in for twenty-four hours, and the patient was then sent home. The results of these different methods of treatment were that the mild caustics ultimately effected a cure, but required at least two months to do so; while the severer methods—that is to say, the fused zinc and alum and the scarification—produced a permanent cure in about a fortnight. The author adds that no unpleasant symptoms were caused by either the caustics or the scarification in any of the eighty-two cases.

Cold Applications to the Præcordia in Fever.

Grigorovich presents the following conclusions regarding the effect of applying cold water to the region of the heart, based on a series of experimental observations made in the Rostoff military hospital:

1. The cold undoubtedly reaches the heart itself, and thus produces an effect on its action.

2. This effect is particularly noticeable when the cardiac beats are increased in frequency in consequence of a high temperature quickly attained, and where a certain degree of sensitiveness to a high temperature exists.

3. The effect of cold is not marked at the end of a prolonged attack of fever, pathological changes having by that time probably become established in the cardiac muscle.

4. The local application of cold is only capable of protecting the heart muscles from the effects of a high temperature when it is applied assiduously from the commencement of the disease.

5. Under its influence the action of the heart improves, the number of beats diminishes, while their force and amplitude increase.

6. Cold applied to the region of the heart diminishes the gravity of the typhoid condition, and favorably influences the respiration.

7. With regard to the effect of cold applied to the region of the heart on the course of the general temperature, Grigorovich can not at present express a decided opinion, as he did not investigate the question; but in the results which he obtained, indications may be found of the possibility of its causing some diminution of the temperature.

Pneumotomy in Pulmonary Abscess.

Dr. Runeberg, Professor of Medicine at Helsingfors, in a clinical lecture which has been published in a Swedish journal published in Finland, gives an account of a case of pulmonary abscess consequent on acute pneumonia, where he had performed pneumotomy with success. In addition to this he had collected notes of ten other cases. Leaving aside three of the eleven on account of the uncertainty in the diagnosis, five of the remaining eight recovered, or at all events improved very decidedly, and in the rest, which were fatal, death could not in any way be attributed to the operation, so that Dr. Runeberg considers that when the diagnosis of pulmonary abscess is clear, and it is in an accessible situation, the best practice is certainly to open it. He then refers to the question of operating for gangrene of the lung. He himself had had a case of this, together with bronchitis and bronchiectasis; after the operation secondary gangrene and septicæmia occurred, which proved fatal. In seventeen other cases of gangrene he quotes from medical literature where pneumotomy was performed, seven recovered more or less completely, and the fatal termination of the remaining ten did not appear to have been attributable to the surgical interference. As to the method of opening the lung, Dr. Runeberg is in favor of resecting a rib, and then using the thermo-cautery. He does not approve of washing out the cavity with antiseptic lotions, thinking them dangerous, and believing that ample drainage is sufficient. In conclusion, he mentions several pneumotomy cases he had collected: two were for ecchinococcus, both terminating favorably; six were for bronchiectasic cavities with gangrene; and six for tubercular cavities. In the latter two classes of cases he does not think operative procedures are advisable.

A New Form of Exophthalmos.

Since the researches of Hack and others there is known a series of reflex neuroses of nasal origin. Hack had been led to join exophthalmos to these neuroses from the following case (*Archives Générales de Médecine*, Nov. 1886): A girl of 17 years was brought to consult the author by a doctor, who furnished precise information about her history. From early years she had been affected by characteristic double exophthalmos, and during the same period there was a tendency to obliteration of the nasal fossæ by mucous masses. In May, 1885, she complained of pains and of severe cardiac palpitations. Soon there appeared signs of cardiac hypertrophy. At the same time the exophthalmos was aggravated, and the tumefaction of the left lobe of the thyroid increased. Obstruction of the nasal fossæ increased to such a point that energetic treatment appeared necessary.

The author, therefore, with the cautery removed these growths from the right nostril. The result was surprising; even when the nostril was still obstructed by the inflammatory products due to the cauterization, the exophthalmos of that side lessened—indeed nearly completely disappeared. The exophthalmos on the left side persisted unchanged. Some days after the left nostril was similarly dealt with, and on this side also the exophthalmos was diminished, but less rapidly and less completely than on the right. Before the patient left, the cure of the nasal fossæ was completed. After several months it appeared that the nearly absolute cure of the exophthalmos was maintained. The palpitations disappeared, and the heart regained its normal volume. The enlargement of one lobe of the thyroid has diminished, but without disappearing completely. Visual acuity was normal. It is claimed that here is an instance of a reflex neurosis, Graves' disease, cured by nasal cauterizations.

Gigantic Nettle-Rash.

Dr. E. RAPIN has published an interesting article on certain rare forms of nettle-rash. His main conclusions may be summarized thus:

1. Amongst the various forms of urticaria there is one characterized by the large size of the patches, which has obtained the name of "gigantic nettle-rash" (*urticaire géante*).

2. The rash may be limited to one or two patches, which sometimes affect certain special regions (hands, forehead, neck).

3. Itching, which is generally regarded as a constant sign of nettle-rash may be absent in some of the cases under consideration.

4. Œdematous patches of the rash pit but slightly on pressure.

5. Therefore the absence of itching and of pitting has no particular value in the recognition of nettle-rash generally.

6. Urticaria of the scalp occurs in the shape of hard lumps, resembling rheumatic deposits, for which they may be mistaken. The differentiation of these two conditions may be made from the absence of other symptoms, the occurrence or non-occurrence of tenderness, and the greater or less duration of the affection.

7. Nettle-rash occurs not only on the skin, but also on the mucous membrane of the digestive canal, at any part from the mouth to the anus. It may give rise to swelling of the tongue and pharynx, pain in the gullet and stomach, eructation, vomiting, and diarrhœa.

8. The presence of urticaria in the alimentary tract explains also the occurrence of anxiety and dyspnœa in some of these cases. The author was not able to convince himself as to the existence of urticaria in the bronchi.

9. Urticaria and migraine seem to be the manifestations of one diathesis.

Subcutaneous Emphysema Following Labor.

"On February 10th, 1885, during my residence in New Zealand," (says Dr. J. P. STALLARD, in the *Brit. Med. Jour.*), "I was summoned to attend a lady who lived up country. The messenger who came for me said that she had been safely delivered of a child, but had developed peculiar symptoms, which the midwife who was in attendance had never, during a long experience, seen before.

The mother was a primipara, aged 24, of dark complexion and slight build.

She had consulted me twelve months previously, thinking that she suffered from consumption, of which complaint she told me her father had died. I could, however, find no trace of lung-disease, both sides of the chest acting equally well, the percussion-note also being good. She was, as I have often found amongst people who live in the bush, where neighbors are few and far between, of a decidedly melancholic temperament.

"On arriving at the house, I found the labor had been satisfactorily completed. The pains during the second stage had been extremely severe and of long duration. With the expulsion of the placenta there had been rather more than the usual amount of hæmorrhage, but not to a dangerous extent, and soon afterwards the patient complained of loss of eyesight. On examination, I found extreme puffiness of the whole of the face, which extended to the neck and upper part of the chest. She was quite unable to open the eyes, and complained of a tightness of the skin on the face and forehead. The breathing was unimpaired. On palpation, marked crepitation was felt over the whole of the affected part, and was evidently due to the presence of air.

"An evaporating lotion was applied to the skin, and absolute rest ensured. The swelling gradually subsided, and after eight days it had entirely disappeared."

A Curious Lachrymal Case.

A correspondent thus writes to the *Lancet* the following case, which in my experience I am glad to say is unique, deserves a passing record:

On Saturday, January 29th, a young man came to my clinic. The whole of the right side of his face was considerably swollen, puffy, and covered with scabs in places. About half an inch below the lower lid in the angle formed by the cheek and the nose, but far removed from the position of the lachrymal sac, these crusts become unusually thick, and projecting from their centre was visible the upper extremity of a hollow silver lachrymal style. Struck by its unusual position, I began to seek for the distal extremity. This was found in the mouth between the gums and cheek, just above the socket of the right canine tooth. It had not perforated the mucous membrane, owing to the discharge produced by its irritation having found exit through the cheek, but it could easily have been pushed through had it been of sufficient length. Any movement communicated to the cheek moved the whole tube *in situ*, and it had obviously never been in the proximity of the lachrymal apparatus or nasal duct. The way the operation must have been performed was no doubt as follows: The supposed position of the lachrymal sac having been determined, an incision through the skin was made over it. The subcutaneous structures having been reached, the style was pushed downwards, passing in front of the superior maxilla below the whole thickness of the cheek, and was there left. The tube had been in its present position for fourteen months, and it is needless to say the slight lachrymal obstruction which it was intended to have cured had derived no benefit. The case was seen by Dr. Davies, Mr. Wicks, Mr. Brewis, and other gentlemen who kindly assist at my clinic.

Mumps, Orchitis, Rheumatic Fever, Chorea.

"The following case, I think, is of interest," says Dr. C. AITKEN in a foreign exchange, "as lately there has been much discussion about rheumatic fever fol-

lowing several diseases. About a couple of months ago I was called to see a boy, aged 12, who was suffering intense pain in the left testicle. On examining the patient, I found that he was recovering from an attack of mumps, and as there was no other obvious cause for the pain, I came to the conclusion that this was a case of metastatic inflammation in the testicle.

"The pain soon yielded to a course of poultices. Hardly had the pain left and the patient expressed himself better, than a rather severe attack of rheumatic fever set in, with pain in the joints, but without any heart mischief. The boy was then treated with salicylate of soda, with much benefit, and was free from pain in five or six days' time.

"On the sixth day, at my morning visit, I noticed that the boy was jerking his hands and arms about, would laugh without any reason whatever, and had some slight difficulty in answering my questions; in fact, he had an attack of chorea, which was more marked on the right side than the left.

"I then gave him arsenic and iodide of potassium, and after a few days he was convalescent, but rather weak. Since that time I have occasionally seen the patient, who is progressing favorably, but slowly. The curious part of this sequence of diseases is that the mumps was followed by the inflammation of the testicle, which is rather rare, and that the rheumatic fever should have been succeeded by the attack of chorea.

"An epidemic of mumps has paid this place a visit, and I have only had two cases of metastatic inflammation; one, the case mentioned above; the other, inflammation of the left ovary in a middle-aged woman."

Some Points in the Treatment of Fever.

Dr. Sidney Phillips pointed out in the course of his paper before the Harveian Society of London that pyrexia was one of the dangers of the febrile state, and though its mode of production was not yet satisfactorily explained, it required treatment as a symptom. The chief indications for antipyretic should treatment be the avoidance of hyperpyrexia, and the securing of remissions or intermissions if the temperature remained continuously high. The cold bath was a very effective but very transiently-acting antipyretic agent, and there were many conditions contra-indicating its use; it should not be used as a first resource. Quinine took a long time to act, was required in large doses, and often produced disagreeable effects; it was ill-suited for cases of hyperpyrexia. Salicin and its salts were ill-suited for general antipyretics on account of their action on the heart. Antipyrine was very constant, very rapid, and very powerful in action; its effect was of short duration, and it produced free sweating. Collapse due to the drug was rare, unless over-large or over-frequent doses were given. Antifebrin was superior to antipyrin in the smallness of dose required, and in its cheapness; it produced less sweating. The local application of ice to the præcordial region with a view of protecting the heart-muscle from the effects of a high temperature was advocated. The importance of keeping up cardiac power to ensure elimination by the excretory organs was insisted upon, and seeing that Charcot had found albuminuria to result from mere slackening of the renal blood-flow, it was possible that the albuminuria of the febrile state was in part due to this cause.

Dr. Cleveland remarked on the value of alcohol as an antipyretic.

Dr. William Duncan thought cold was best applied by means of the ice-cap.

Dr. M. Handfield Jones advocated the combined use of large doses of quinine and frequent cold sponging.

The Significance of Uric Acid Deposits in Urine.

Dr. JOHANNES MYGGE, while chief of Professor Trier's clinic in Copenhagen, having repeatedly remarked abundant and persistent deposits of uric acid coinciding or alternating with albuminuria, carried out a series of examinations on the urine of the 272 male patients under his supervision. Of 3287 urines examined, 2786 from 127 patients were entirely free from uric acid deposits, while they were found in 501 specimens from 105 patients, but only in any considerable quantity in 262 specimens from 59 patients. In 43 of these last patients the deposits were of a transitory character—that is, they were only observed once or twice; while in the remaining 16 they were found to persist for a week or more. Deposits both of a transient and of a permanent character were found, especially in rheumatic affections, whether of an acute or chronic form. Transient deposits were found also in pneumonia in 11 cases out of 25. In 27 out of the 59 patients in which uric acid deposits were observed albuminuria was also present in appreciable quantity, and in many of the rest there was a doubtful trace noted. Dr. Mygge's observations confirm Dr. Dickinson's statement that deposits of uric acid of a transitory character frequently coincide with the suppression of acute albuminuria. In the majority of cases where the deposit was examined microscopically, casts or tubal epithelium cells were found, indicating that some connection probably exists between uric acid deposit and functional renal disorder. In some instances, it may be supposed that a peculiar condition of urine, especially its supersaturation by uric acid or an increase in its acidity, has irritated the epithelium of the tubes, and has thus set up a renal lesion. In others, the latter condition doubtless proceeds the precipitation of uric acid, and here Esbach's theory of the precipitation of uric acid being due to the existence of morphological elements in the urine may afford an explanation.

Suppurative Peritonitis.

Dr. GOODHART read a paper on this subject, before the Harveian Society of London, of which the following is an abstract. The author related several cases, illustrative of the resemblance of the symptoms of suppurative peritonitis to those of intestinal obstruction, in each of which, however, there had been subsequent diarrhœa. A remarkable feature of these cases was the absence of high temperature, and much stress was laid upon the uncertainty of this sympton, as, in a considerable proportion of such cases, the temperature was not raised at all. The degree and position of pain was also shown to be indefinite in its indications. Diarrhœa, in the presence of other symptoms of peritonitis, must be regarded as a most serious symptom. The bowel, in ordinary peritonitis, was more or less paralyzed, and constipation resulted as a general rule; but this did not hold good for the suppurative form of the disease. The fact that peritonitis, and especially suppurative peritonitis, frequently spread to the pleura by direct extension, was insisted upon, and the necessity for closer observation of this point was maintained. Apart from the ordinary treatment of peritonitis by opium,

belladonna, and the administration of food by nutrient enemata or suppositories, no positive rules of treatment could be laid down. Surgical interference in some cases might save life; but its use could only be determined by close study of the particulars of each individual case; those most generally suitable for such interference were those in which the disease showed a tendency to localize itself, or, at any rate, had given some indication of having originated in an accessible situation. Dr. WALTER PEARSE mentioned a case in which, after resection of the knee, excessive vomiting, with diarrhœa, but no rise of temperature, had supervened, with fatal result. Suppurative peritonitis had been diagnosed, but none was discovered after death. Enormous dilatation of the stomach was the only abnormal condition.

Sudden Death in Pleurisy.

Some years ago the occurrence of a series of cases where death suddenly took place during or after the operation of paracentesis thoracis led to much discussion, especially in the Paris Société Médicale des Hôpitaux, without, in many instances, clearing up the cause of the fatal event. Post-mortem examination often failed to reveal lesions, although the fatal attack was in most cases ushered in by convulsions. Of late we have heard less of such accidents; but the subject of sudden death in pleurisy is one which deserves study. Dr. Weill of Lyons contributes to the current number of the *Revue de Médecine* an essay concerning it, which hardly includes the class above alluded to where the seizure supervenes upon operative interference. He speaks rather of cases of pleural effusion that are unrelieved by art, and arrives at the following conclusions: That sudden death in pleurisy is allied to certain lesions—such as cardiac or pulmonary thrombosis or embolism, œdema of the opposite lung, and changes in the myocardium. Such derangements as grave syncope, mechanical impediment to the circulation from displacement of the heart and torsion of the great vessels, and hypothetical lesions, as multiple cerebral embolism, may be provisionally accepted, but require further investigation before being accepted as adequate explanations of the event. Sudden death may occur in various forms of pleurisy—in right pleurisies more often than in left, in acute or in chronic cases, and in cases of progressing, stationary, or absorbing effusion. The effusion is generally serous. The cases may or may not be accompanied by special symptoms, such as attacks of dyspnœa, syncope and irregularity of pulse; but often death will occur quite unexpectedly without any premonition, and following upon some movement or effort on the patient's part. Paracentesis is the only prophylactic measure, and would be indicated by the onset of threatening symptoms, or evidence of heightened intra-pleural pressure.

Open-air and Consumption.

Dr. CHAS. AITKIN thus writes to the *Brit. Med. Jour*: Three years ago, while riding about the west coast of the south island of New Zealand, examining on an average a hundred men every month for the life insurance department of the Colonial Government, I was so struck with the absence of consumption (notwithstanding that the great majority of the men were emigrants from Great Britain, and that cardiac and other serious affections were by no means infrequent), that

I took some trouble to study the conditions under which they lived, with a view to finding some explanation. I was very soon led to the conviction that it was largely owing to their houses, which were invariably constructed of wood, and in all of which there was unintentionally the most complete and constant ventilation, by reason of the very imperfect contact of the overlapping boards that formed the walls, often so very imperfect, that abundant daylight was easily visible also. In a report to the Commissioner, I drew special attention to the fact, and suggested the above explanation.

Now granting that in cows consumption prevails specially among those kept in numbers within stuffy dairies; that in horses it is found specially among those aggregated in ill-ventilated stables; that in monkeys it spreads among those herded together in cages; granting also that in human beings consumption is found in largest proportion where the population is most dense, as in every large city in the world; that it specially attacks indoor factory operatives, whether male (Birmingham, Sheffield, etc.) or female (Nottingham, Huddersfield, etc.); that its prevalence in our own and other European armies was reduced from 12½ to 1½ per cent., by abolishing the stuffiness of barracks; and that a similar improvement has been noted in our navy, gaols, workhouses, asylums, and schools; granting finally that 10 per cent. of our population still die of consumption, and that no other single disease kills half so many; surely we may rely much more than we do upon the efficacy of fresh air, and leave a smaller number to prop themselves up with hypophosphites and cod-liver oil.

Rare Case of Epilepsy.

At the meeting of the Medical Society of London, on November 15, 1886, Dr. Hughlings Jackson related the case of a boy, 7 years of age, in whom epileptic fits were artificially induced by an unexpected touch on the head. When three days old the boy had a convulsion. At the age of 2½ years he had an "ordinary" eptileptic fit. Of these latter fits he had four attacks of the same kind, or rather *degree*. Ever since the first so-called ordinary eptileptic fit some imperfect use of the left arm and leg was noticed, and has ever since remained. About the age of 2½ years the boy began to fall down, but these falls were really fits. He never "fell" unless the head or face was touched, but the fit would not occur if he knew he was going to be touched. Stoppage of respiration was very evident in the fit. The eyes were turned to one side, generally the right. Sometimes as many as fifty falls occurred in one day, and never a day passed without some. Touching any part of the head or face was effective. Several appeared also during sleep when he accidently touched his face or head. These sudden inopportune falls had caused enlargement of the left frontal eminence, and also that of the right side. The left arm was slightly less in circumference, and its movements were clumsy; there was something like athetosis in the left hand when the right hand was engaged in drawing or writing. He limped with the left leg, which was also less in circumference than the right. There was no alteration in the knee-jerks, and no ankle clonus. Perhaps the left side of the head was more sensitive, but no one place could be made out to be more sensitive than another. At times the boy said his left arm felt "heavy." The fits were not opisthotonic, as happened in feigned fits. Dr. Jackson described three forms of epilepsy—(1)

epilepsy proper; (2) epileptiform seizures; (3) due to nervous discharges in the pons Varolii or medulla oblongata. In the case above there was a local lesion somewhere, as the hemiplegia showed. The epileptogenous zone was less defined than occurred in Brown-Séquard's guinea-pigs. Nervous discharge in some part of the pons was the probable cause of the falls or fits.

Xanthium Spinosum and Russian Baths in Hydrophobia.

In the *Russkaia Meditzina*, Dr. IVAN J. MAKAVÉEFF, of St. Petersburg, describes seven cases where the patients were bitten by rabid animals (four by wolves, three by dogs), and subsequently treated by the internal use of powdered leaves of xanthium spinosum, given in ten-grain doses, three times daily, and by steam-baths, taken every other day, for six consecutive weeks. No cauterization of the wounds was made in any of the cases. In two of the patients the treatment commenced several hours after the bite; in other two, on the second day; the remaining three, steam baths were resorted to on the day of the accident, but the xanthium powder could be obtained and given only ten days later. In none of the patients hydrophobia made its appearance. Six of them (three were bitten ten years ago; two, nine; one, five; and one, two) are still living; the seventh, a man, aged 60, died from old age four years after the bite. Two of his companions, who had been attacked by the same rabid wolf, died from hydrophobia in two or three weeks after the accident. During his service in the Kaluga zemstov, the author saw not fewer than thirty cases of hydrophobia. In one of the patients the incubation period lasted ten days; in one, three weeks; in a vast majority, exactly six weeks; in none was it longer. All died on the third day of the disease, in spite of treatment by all possible means (including inhalations of oxygen, which even increased the severity of the symptoms). The author states, also, that he never saw any case of hydrophobia where anything like "violence" or "madness" was present, and generally thinks that the violent behavior of hydrophobic patients may be brought about only by a "rough and irritating nursing." According to Hager's *Handbuch der Pharmaceutischen Praxis Ergänz.*, xanthium spinosum was recommended, as a prophylactic against hydrophobia, by Drs. Kostoff and Grzymala, who gave the drug internally, in a daily dose, varying from 50 to 100 grammes, and also applied an infusion to the wounds. Grzymala bases his recommendation on invariably successful results obtained during twenty years' practice. The herb possesses diaphoretic, diuretic, and ptyalogogue properties, increases the temperature of the body, favors the digestion, etc. As Yvor's researches show, it does not contain any alkaloids.

A Suggested Method of Operating on a Uniform Principle in the Treatment of Imperforate Anus, with Example.

Before the Clinical Society of London, Mr. MAYO ROBSON read a paper on this subject, in which he gave extracts from several authors to prove that the recognized treatment of cases where the bowel was not soon reached was to perform either Littre's operation or colotomy, although the mortality of the operation, judging by published statistics, was extremely heavy—for example, M. Guersant had operated in this manner twelve times without saving a patient. He advocated an incision from the central point of the perineum to the coccyx, and then

a careful dissection, until either the bowel was reached or the peritoneum was opened, when the upper end of the rectum or the sigmoid flexure of the colon could be brought down and sutured to the skin in the anal region. He described a case in a child one day old, on whom, in March 1886, he had performed this operation with a very good result, the child recovering without a bad symptom, either local or general, and when seen last the patient had what appeared to be a normal anus, through which it had a motion about once a day. He considered the operation ought not to be very difficult if a catheter was passed into the bladder and a good horizontal light was available, that it should not be very dangerous either from shock, peritonitis, inflammation, or hæmorrhage, and that the result, if successful, was infinitely preferable to that of Littre or a colotomy. Mr. Godlee said that the escape of meconium into the peritoneum did not set up the same irritation as ordinary fæcal matter. Mr. Harrison Cripps criticized the statistics brought forward in the paper. He had collected about a hundred cases, in many of which Littre's operation had been performed with success. He had had five successful cases out of sixteen. The results of operations when there was no sign of an anus were much more favorable than when some trace could be seen, as the malformation was often more serious in the latter case. He preferred Verneuil's operation of resection of the coccyx without opening the peritoneum, when the bowel was almost always found close to the bone. If Verneuil's operation failed, he would do Littre's. Mr. Robson, in reply, said that there was an advantage in stitching the mucous membrane to the skin, if only to prevent extravasation of the areolar tissue.

Is Tetanus a Contagious Disease?

The *Med. Press.* says: At the congress of French surgeons held recently in Paris, and reported in the last issue of this journal by our special correspondent, in the discussion as to the nature and treatment of tetanus, some opinions were advanced which merit attention. One of these was that of M. Thiriar, who was convinced that the malady was due to microbes, but the most startling was that of M. Verneuil, who had the temerity to assert that tetanus, like anthrax, glanders, and trichinosis (!), was derived from animals, and especially from the horse; he announced that it was also specific and infectious, its development being dependent upon germs derived from without, these obtaining access through wounds. In support of his notion, he gave instances of the communication of the disease from the horse to horse and man to man. We do not happen to have the details of these instances before us, but we have submitted Prof. Verneuil's views to Dr. Fleming, the distinguished head of the army veterinary service, whose opinion will be highly valued. He writes us thus:—"After an experience of more then thirty years among horses, during which very many cases of tetanus have come under my notice, in peace and during war, I have never met with the faintest evidence which would lead to the supposition that the disease is either infectious or contagious, or transmissible in any way from animals to animals, or from them to mankind. Of the scores of cases that have been in my charge, none of the men who had attended on them suffered in any respect through contact with the sick horses, neither did other horses show symptoms of tetanus. The disease is far from rare in horses, but the cause is generally punc-

tured wounds, especially those of the foot, and it often follows the operation of tail amputation, known as "docking," and now so common, owing to the prevalence of a depraved taste, an abominable fashion. But horses also suffer from idiopathic tetanus, in which there are no wounds for the entrance of microbes. In large depôts of horses sporadic cases of tetanus appear, perhaps a case in twelve months, as a result of injury or operation, but the animals in the stable with the diseased one remain unaffected. It may be mentioned that all the domesticated animals are liable to the disease, but the one in which it is most readily developed is the ass, and then usually from a foot pricked in shoeing." We do not believe that any member of the medical or veterinary profession in this country could be found to lend countenance to M. Verneuil's hypothesis.

Paroxysmal Hæmoglobinuria in Sweden.

Dr. R. Bruzelius, writing in the *Nordiskt Medicinskt Arkiv* on paroxysmal hæmoglobinuria, gives an account of the only three cases he has seen in the course of a long period of practice. These are the only ones which have been published by a Swedish practitioner, and in Norway only two cases have been reported. Of all countries, England, he remarks, appears to have produced the greatest number of instances of this affection. The first case is that of a woman who, at the age of twenty-seven, after exposure to cold, experienced slight rigors, pain in the sacral region, pruritus, and urticaria. These attacks returned the next four years, and then there occurred a very marked attack, with a rigor, urticaria, jaundice, and hæmoglobinuria. Subsequently similar attacks were noted, the severity of which appeared to be directly proportional to the amount of exposure to cold which caused them. The patient was peculiarly sensitive to cold—*e. g.*, the contact of the hand with the cold window for a few minutes brought out urticaria, with pricking and itching sensations. During the attacks there were marked crises, with rigors, pyrexia (39.5 C.), sweats, pain in the sacral region, urticaria, jaundice, and highly colored urine containing hæmoglobin, casts, and albumen, but no red corpuscles. At the end of from three to eight hours the fever disappeared, the urine regaining gradually its normal characters. There were also other attacks of a milder nature. The microscopic examination of the blood during the attacks failed to discover any evidence of the destruction of the red blood-corpuscles, while the spectroscope revealed the presence of hæmoglobin in the plasma. Twelve years after the first attack the author saw the patient again. She had not had any marked attack during the previous three years, having carefully avoided all exposure to cold. The second case was that of a man aged fifty-two, who five years previously had been seized with an attack of hæmoglobinuria after exposure to cold air, and who subsequently always suffered from similar attacks on any exposure. No treatment proved of any avail. The man died ultimately of disease of the heart. No signs of syphilis could be detected. The third case was that of a man aged seventy-one, who had this disease for two years. He died of acute pneumonia. Dr. Bruzelius considers paroxysmal hæmoglobinuria to be a blood disease, the destruction of the corpuscles taking place in the organs of circulation, and not only in the kidneys, as was supposed by Rosenbach. In each case the immediate cause of the hæmoglobinuria was refrigeration of the body. Other observers have, however,

reported fatigue as the cause. Murri and Schumacher look upon syphilis as the real cause of the disease, but in only one of the present cases was there any sign of syphilis.

Microscopical Diagnosis of a Nephro-Intestinal Fistula.

Nephro-intestinal fistulæ are certainly rare. Dr. R. WERNICKE, who publishes his observations in the *Annales del Circulo Médico Argention*, has only met with three cases in literature, and so believes this to be the fourth. In May last he was asked by Dr. Montes de Oca to examine a sample of urine in a flask. The color was yellow and there was some turbidity, also a copious yellow sediment containing grey clots of irregular shape. The reaction was alkaline, and the liquid after filtration contained albumen. The turbidity was evidently due to putrefactive microbes and leucocytes, The sediment on microscopical examination showed the presence of leucocytes, red blood-corpuscles, vesical epithelium, caudate or pyriform epithelial cells from the pelvis of the kidney, granular casts, particles of fatty matter (highly refracting and of a yellow tint), quantities of small aggregations of granules (highly refracting, some of the granules being attached to one another, and some surrounded by a yellow, structureless envelope, being in fact coagulated milk); and lastly, a number of striated muscular fibres, stained with biliary pigment, the striæ being more or less obliterated, according to the stage of digestion which had been reached. As there was no question that the whole of the contents of the flask had been passed from the urethra of a man, there could be no doubt that a communication existed between the urinary and digestive passages. The cause of this ulceration was also diagnosed by further microscopical examination of the sediment, which revealed the existence of tubercle bacilli, which were so clearly recognized both by their form and their behavior with reagents, as to leave no doubt in Dr. Wernicke's mind of their precise nature. The case not being under his care, no clinical details are given. It is seldom, however, that the microscope alone enables so much of a diagnosis to be made in a rare and intricate case such as this.

Recovery from Cirrhosis of the Liver.

A case of recovery from cirrhosis of the liver with ascites, remarkable for its extreme rarity, is reported by M. ROMAIN (*Arch. de Méd. et de Pharm. Milit.*, November, 1886). He was consulted on November 14, 1885, by a small landowner in Algeria, aged 60, who had enjoyed good health with the exception of some slight attacks of remittent fever, and had never had rheumatism or syphilis, but admitted to having drunk hard. When seen his general condition was apparently very grave: there was pain in the right hypochondriac region, slight enlargement of the liver, great ascitic distension of the abdomen, and marked œdema of the scrotum and lower limbs. The heart and kidneys seemed healthy; no albumen in urine. On admission to hospital he was ordered milk, infusion of triticum repens with nitre, tincture of squills, and iodine of potassium, with dry cupping of the chest to relieve the oppression of the breathing. For some days there was no change for better or worse, and at the end of the month, being compelled to leave the hospital on business, he was attended at his own home by Dr. Romain. The same remedies were persevered with, and the improvement, which

began to be observed on December 5, was so rapid that by the 15th, or one month from his coming under the care of Dr. Romain, he might be considered cured. In July of this year, after a lapse of six months, he was still in good health, working as usual, complaining only of slight occasional pains in the liver, which appeared somewhat congested. At Dr. Romain's advice he had become more sober, though far from abstaining from alcohol. Dr. Romain remarks that the ascites, coming on in the earlier or congestive stage of cirrhosis, is due to the compression of the ramifications of the portal vein by the congested interlobular tissue, whereas that which appears first in or persists during the atrophic stage is caused by the contraction of the interstitial connective tissue, which takes the place of the glandular structure. In the latter stage cure is hopeless, but in the former, as several recorded cases prove, much may be expected from judicious treatment. [Probably in this and other similar cases the successful result is to be attributed to the unusually early appearance of ascites, leading the patient to seek advice before it was too late.]

A Case of Paraplegia Supervening on Measles.

Surg.-Major Annesley reports (*Arch de Méd. et de Pharm. Milit.*, November 1886) a case of paraplegia supervening on measles in a strong young man, aged 24, a bugler in the 129th Regiment of the line. On the fourth day after admission (June 21), when he appeared to be convalescing, and had left his bed to walk to the closet, he staggered and fell. Next day the paraplegia was complete: voluntary and reflex movements and sensibility were completely lost, and the bladder was paralyzed and distended with urine, involuntary defacation followed, and severe pains in the lumbar region, not increased by pressure. The thermo-cautery was applied along the vertebral column. Two days later (June 24) sensibility began to return with formication; on the 28th there were reflex and involuntary muscular contractions, and on the 29th he could retain and pass urine and fæces at will. But bed-sores, which threatened as early as the 24th, rapidly spread, and on July 2 the subpubic pains were intense, the urine being ammoniacal, and œdema of the scrotum, penis, and lower limbs followed, with congestion of the lungs. By the 10th the œdema had somewhat subsided, but on the 12th and following days there were rigors; the temperature rose to 40.8° C. (105.5° Fahr.), and after lingering till the 21st the patient died of exhaustion. At the autopsy made next day there were found pleural adhesions and much congestion and caseous deposits in both lungs; nothing remarkable in the other viscera. There was only one slight congestion of the meninges of the brain, but the vessels of the spinal cord and membranes were highly congested, the veins of the cord, especially in the lumbar region, being gorged with dark blood. Unfortunately, owing to an accident, the microscopical examination of the spinal cord, which was to have been made by M. Cornil, was not completed. No sclerosis, however, or inflammatory lesion, beyond the congestion of its vessels, was observed. Paralyses after measles are very rare, records of only a few cases, about a dozen, having been collected by Landouzy, and but one having been seen by Parrot. Various causes have been suggested, but these cases, as well as those following other acute specific diseases, are most probably due to the direct toxic action of the specific poison or microbes on the substance of the spinal cord itself, and not to mere asthenia or congestion.

Treatment of Asthma with Pyridine.

Dr. Wyss, of Geneva, in *Der Fortschritt*, No. 1, January 5, 1887, commenting on the treatment of asthma with pyridine, writes: The physiological and therapeutical properities of pyridine had first been investigated by Professor G. Sée. His pupil, Dr. Dandien, recently published the results of his researches on pyridine and allied basic substances (collidine), and draws the following therapeutic conclusions: 1. The pyridine is indicated in attacks of angina pectoris. Its effects are very rapid. Its use prevents other fits. 2. In asthma, be it of nervous, emphysematous, or catarrhal nature, in the pathological as well as in the symptomatic asthma, the effects of pyridine are superior to those of injections of morphia; they are of longer duration, and perfectly devoid of dangerous consequences. Moreover, pyridine is not merely a palliative, but really a curative remedy. 3. It is equally indicated in asthmatic attacks brought on by inhalation of poisonous gases. 4. Its beneficial effects are improved in dyspnœa of bronchiectatic and tuberculous patients, and in dyspnœa in consequence of laryngeal affections. There is no contraindication against the use of pyridine. Its absorption and elimination by the urine being very rapid, no accumulative effects are to be apprehended. Germain Sée gives the following directions for its use: 4–5 grammes (about four scruples) are poured into a small plate and placed in the midst of a room of 25 cubic metres. The patient, sitting in a corner of this room, inhales the volatilizing pyridine mixed with the air. In urgent cases the pyridine may be directly inhaled by pouring four or five drops of it on a pocket-handkerchief, which is held before the patient's mouth and nose. Further independent observations will prove whether the properties of the pyridine bear out the extraordinary praise with which Dr. Dandien extols the efficacy of this remedy. The great drawback is the strong, disagreeable smell, reminding of rotten fish, of the slightly yellowish fluid, which will not be easily concealed. Dr. Wyss adds:—I tried the pyridine in only one case of a female patient, suffering for many years from asthmatic attacks, in which the remedy had unmistakably a beneficial effect. The patient, aged 44, has, since December 16, regularly, daily, three inhalations of pyridine, and has since been free of fits; whilst, before resorting to this remedy, she suffered at least twice a week from very severe asthmatic attacks.

Bronchitis in Reference to Position during Sleep.

Dr. G. Nosovitch (*Vratch*, No. 44, 1886) has examined 738 soldiers of the Nevsky Regiment, and found bronchitis in 235 (31.8 per cent.). In 97 (13.1 per cent. of the whole number examined, and 71 per cent. of the bronchitic men) the disease was left-sided; in 72 (9.7 per cent., respectively, 30.5 per cent.) right-sided; and in 66 (8.9 per cent., respectively, 28 per cent.) both-sided. Being struck with such an extraordinary frequency of one-sided localization of the disease (+30.5=71.5 per cent.), he began to search for an explanation of the fact, and soon came to the conclusion that it might depend upon the habit of sleeping on one side (on the right in some, on the left in others), which habit might involve a certain difference in conditions with regard to ventilation between the right and left lung. To verify that supposition, he undertook observations for ten successive nights on 612 sleeping soldiers, and found that 37.44 per cent. of them slept

on the right side, 33.17 per cent. on the left, 28.09 on the back, and 6.29 per cent. on the belly. The figures obtained obviously could not support the original hypothesis; for if a defective ventilation of the lung could be a predisposing cause of bronchitis on the same side, a right-sided affection should be met more frequently than the left-sided one, which was not the case. Still the author is inclined to think that there exists a certain etiological connection between one-sided bronchitis and one-sided posture during sleep. When a man sleeps on one side, his respiratory tracts on the opposite (upper) side are more exposed to the action of cold. A certain parallelism of the author's figures seems to speak in favor of that supposition: there were 33.1 per cent. of left-sided sleepers, and 30.5 per cent. of right-sided bronchitis: 37.4 per cent. of right-sided sleepers, and 41 per cent. of left-sided bronchitis; while the number of both-sided bronchitis (28 per cent.) coincides with the number of men who slept on the belly or back (29.8 per cent.), and in whom, therefore, both of the lungs stood under identical conditions in regard to their liability to catching cold. A certain predisposing influence may be ascribed also to the fact that the free (non-compressed, upper) lung of the sleeper makes more extensive excursions, works more, and rests less, than its compeer. Finally, more extensive and free movements of the non-compressed lung may favor a relatively easier and more extensive penetration of "pathogenic principles" into the latter.

Stricture of the Female Urethra.

Before the Obstetrical Society of London, Dr. HERMAN read a paper on this subject. He had measured the female urethra in fifty-five cases in which no urinary trouble was complained of. He found that in the majority a No. 17 catheter would pass, and, in all but two, a No. 14. He related six cases of stricture of the female urethra under his own care. He had collected and arranged in tabular form twenty-three others, which were all that he had been able to find reported. He drew a parallel between the two sexes as to the etiology of urethral stricture, and showed that while it was much commoner in males, its causes were much the same in the two sexes. In both it might be the result of injury (these cases being proportionately commoner, in women on account of child-bearing), or of the cicatrization of chancres. In the woman it was sometimes due to so-called lupus of the vulva. In both sexes the chief cause in young and middle-aged subjects was gonorrhœa. In the aged of the male sex, enlargement of the prostate was the common form of stricture. In old women there was found stricture due to general fibrous thickening and induration of the urethra occurring without any history of gonorrhœa, or other discoverable local cause. The author suggested that as in women the homologue of the prostate gland was the urethro-vaginal cellular tissue, these cases were possibly analogous to enlarged prostate in the male. As to treatment, he found that rapid dilatation was so simple and successful, that it was preferable to any other method.

Dr. Horrocks related two cases under his own care, both of which he considered were congenital. He approved of the treatment by dilatation.

Dr. Aust Lawrence (Clifton) considered stricture of the female urethra rare. He had met with only two cases in the last fifteen years. One was in an old woman, and appeared to be due to cicatricial bands, the other was in a young

woman, probably the result of specific urethritis. Both were cured by dilatation.

Dr. Amand Routh mentioned a case of inflammatory urethritis which appeared to have commenced with anterior parametritis, and spread downwards along the cellular tissue of the vagina, a double urethral stricture eventually resulting.

Dr. W. Griffith had that day seen a case at the Samaritan Hospital in a married nullipara, aged 30. She had probably suffered from gonorrhœa. The stricture was one inch and a quarter from the meatus, and only just admitted a uterine probe. It was dilated in a few minutes with bougies to No. 18.

A Primary Epileptic Seizure Occurring During an Operation for Hæmorrhoids with the Clamp and Cautery.

Dr. Samuel T. Earle, thus writes in the *Maryland Med. Jour:* Miss. A. H., æt. about 36 years, white, unmarried, very hearty and robust; had never been subjected to nervous attacks of any kind; consulted me November 17th, 1886, with regard to the treatment of hæmorrhoids. On examination I found a large intermediate hæmorrhoid protruding from the anus. I advised its immediate removal, to which she consented, and after several hours returned to perform the operation. After inserting a solution of muriate of cocaine in several places around the anus with a hypodermic syringe, I waited about fifteen minutes for its anæsthetic effect, when I pulled down the hæmorrhoid with a pair of vulsellum forceps. As I was in the act of applying the clamp, but before I had crushed it, she was suddenly seized with violent general convulsive movements, which were so strong, and so much more pronounced on the right side, on which she was lying, as to turn her over on her belly. She had opisthotonos, entire loss of consciousness for about five minutes, after which it gradually returned and seemed entirely restored at the end of fifteen minutes. Asphyxia; muscles of the lower jaw violently convulsed; pupils unevenly dilated after consciousness began to return; mouth drawn to the right side; speech decidedly thickened for some minutes after her return to consciousness; respiration very labored and at the height of the attack was arrested for some seconds; pulse very feeble; cutaneous surface decidedly blanched, where not purple, until after consciousness began to return, when it alternately became flushed and pallid; she now broke out in a profuse sweat. There was great prostration following the attack and a disposition to sleep.

Diagnosis.—An emotional epileptic seizure, caused by prolonged anxiety, the anticipation of the operation and dread of the necessary exposure. There were no hysterical symptoms proceeding or following it. The following day I removed the hæmorrhoid painlessly under the influence of muriate of cocaine by means of the clamp and cautery, without any recurrence of the unpleasant symptoms of the day before, or the occurrence of any nervous symptoms whatever. She made a good recovery without having an unpleasant symptom, was about her room the third day after the operation, and out doors about the tenth day.

A Calculus in the Bronchus.

La Enciclopedia publishes an account, by Dr. Don Luis Montané, of a case communicated by him to the Havana Academy of Sciences:

The patient was a young lady from the United States, who up to 1884, when she was first seen, had enjoyed good health. In that year she had an attack of pleurisy on the right side, for which parathoracentesis was performed, which removed 930 grammes of fluid. After this she completely recovered. In the early part of 1886 she was again seen for a persistent dry cough, which was considered to be due to pharyngitis, but which did not yield to the remedies prescribed. A painful spot was complained of at the base of the neck a little above the left sterno-clavicular articulation. Up to May 13th there had been no elevation of temperature; for some days after this, however, there was a slight degree of fever, which was quite unaffected by quinine. The cough afterwards became more spasmodic—somewhat resembling whooping-cough; some streaks of blood also appeared in the sputum. On auscultation occasional dry rhonchi were heard over the left apex, and a slight roughness in the breath sounds; there was, moreover, a want of percussion resonance in the left infra-clavicular region. An active counter-irritant was applied, and digitalis ordered, but no good effect was produced. On the morning of May 20th it was noticed that the respiratory sounds over the left apex had become weaker, and in the afternoon the whole of the left lung was almost impermeable to air, only some very slight rhonchi being perceptible at the apex; the percussion resonance was also highly exaggerated, showing the existence of an emphysematous condition of the entire lung. A consultation was now held with Dr. Jover, who suggested that there might be pneumonia of the apex, and that a pseudo-membranous plug, due to the inflammation, was obstructing the left bronchus. He proposed to order an emetic in the hope of dislodging this plug. After ipecacuanha had been given, the cough became less violent, the fever diminished, and the air entered more freely into the obstructed lung. The next morning, however, all the previous symptoms returned with as much severity as before, and this condition continued till May 24th, when the patient, during a violent fit of coughing, expectorated a hard substance, which proved to be a calculus. It measured one centimetre by seven millimetres, and was irregular, ovoid, and hollow, with a rough surface. Its weight was twenty centigrammes. On analysis it was found to be composed of carbonate and phosphate of calcium. Immediately after the expulsion of this body the air penetrated freely into every part of the left lung, the cough disappeared as if by magic, and the fever gradually diminished, till in three days' time the patient was perfectly well. The author states that this is the first case of the kind which has been reported in Cuba. Indeed, such a case as this is of extreme rarity everywhere.

Medicating by Electricity.

Dr. Charles H. Hughes thus writes in the *Medical Standard:* Dr. Brondel's claim for dielectrolysis finds physiological confirmation in the metallic taste communicated to the gustatory nerves through the changed salivary secretion when the galvanic current is passed through the head or through the cheeks. This is minimized molecular transferrence of the copper or other metal wire of the transmitting cord or the copper or zinc elements.

From what we know of electrodialysis and the electrolytic power of the galvanic current, we ought to be prepared to accept with credence statements like those of Brondel, though Brondel may not have proved his assertion.

It is not at all improbable that diseased states can be communicated from one person to another through the electric current. It would not be incredible if some one should announce the confirmation of immunity from infectious disease through dielectrolysis. The wonders of the world in physiology and electricity have not yet ceased. So that we are not prepared to rank ourselves with Dujardin-Beaumetz and other doubters of the French Academy of Science.

Brondel may have failed, but there is a therapeutic power in dielectrolysis of which we have now partial confirmation, advantage of which will be taken by the physicians of the future. Dr. Brondel claimed that by his method of dielectrolysis different antiseptic substances can be passed directly into parasitic neoplasms and even into the parenchyma of an organ. In applying iodine to a uterine fibroid a pad of absorbent cotton saturated with the iodide of potash is placed between the negative pole of the battery and the integument over the part affected.

The positive pole is then introduced into the uterus, and as the salt is decomposed by electrical action, the iodine passes directly through the tissues. This method suggests itself as especially indicated in goitre. Some defects are detectable in the accuracy of his observations, but their truth, generally speaking, is not impeached, and it seems to be established that the new-found power does to a certain extent exist in electricity, and advantage will be taken of it by the therapeutists of the future.

I have noted for a long time the increased efficiency of certain medicines and the reawakened potency of others apparently inactive, after the employment of systemic galvanization.

While it is not probable that medicines can, as a rule, be made to pass from pole to pole through the system, it is quite certain that their passage to parts for which they have affinities can, by this agency, be accelerated, and their appropriation by the tissues can be promoted through its influence on the absorbent system-nerve-centers.

New discoveries in regard to this force should be regarded with less finical skepticism than has hitherto been customary. It probably possesses equal influence over organic nutritional processes with light or heat.

Case of Pernicious Anæmia.

Dr. Thomas Cole, thus writes in the *Bristol Medico-Chirurgical Journal*: W. B., a cabman, æt. 35, was admitted into the Royal United Hospital, Bath, on June 21st, 1886.

He had always lived in England. He had acute rheumatism seven years ago. His health had failed since January—dyspnœa, nocturnal cough, and anorexia being the prominent symptoms. He was extremely pale, and had a troublesome hacking cough, with very short breath on exertion. There was dulness at the right apex, with defective respiratory murmur and crepitation. There was a double cardiac bruit audible at base and apex, and loudest over the sternum. The liver and spleen were much enlarged. The feet and legs were œdematous. The urine contained no albumen, and its density was normal. His pulse was 96. The temperature was invariably pyrexial in the evening for a considerable period, but gradually became normal. There were numerous variously shaped retinal hæmorrhages, mostly striate, and radiating from the optic discs. The red blood-

cells averaged about 940,000 per cubic mm. of blood, and the white about 7500. He expectorated some blood-stained sputum. He was placed upon tartrate of iron, cream of tartar, and digitalis. Under this treatment the œdema subsided, and the general health improved. But the liver and spleen increased in size, and the pallor was extreme. He also had some epistaxis. On July 5th there was a trace of albumen in the urine. On June 28th he was put upon hydrochloric acid, sulphate of iron grs. ij., and liq. arsen. hydrochlor. ♏ iij. ter die. The quantity of arsenic was gradually increased till, on August 2d a dose of ♏ xij. t. d. was attained. On July 19th the spleen had subsided, and the liver was smaller. On the 26th the red blood-cells had increased to 1,780,000 per cub. mm. On August 3d the weight was 10 st. 2 lbs., the cough had gone, the lung trouble seemed obsolete, and the œdema had almost disappeared. Once only was there a trace of albumen. On August 7th he was discharged, fairly well. He lately presented himself at the hospital in good health, all the morbid symptoms having ceased.

That this was a case of pernicious anæmia cannot be doubted. It is not the first case which I have seen recover. There is a ring of despair about the word "pernicious" which, however useful as indicative of the serious nature of the malady, may be injurious by inducing a hopeless attitude in the practitioner's mind, by no means conducive to a patient and persistent attack on so powerful an enemy. The symptomatology of this disease is certainly suggestive of some species of blood-infection, and very possibly an external influence may one day be detected as its cause. Perhaps this may be the reason why arsenic is so useful in this and other forms of anæmia. Be this as it may, it was unquestionably most valuable in the case in question; and I should, without hesitation, recommend the administration of much larger doses of the drug, if necessary, in any similar cases.

Cerebral Rheumatism, and "Rheumatic Insanity."

In a series of lectures published in the *Gazette des Hôpitaux*, the late Professor Legrand du Saulle calls attention to the various disorders of the intellect found in rheumatic and gouty patients. After first speaking against the prevailing tendency of considering insanity as a morbid entity, he says that more attention should be paid to the connection between mental affections and the various diatheses and dyscrasias. So he now wishes to call attention to the influence of rheumatism and gout in the production of these disorders. The attacks of cerebral rheumatism (rheumatic insanity) may be either over-acute, acute, sub-acute, or chronic. The meninges in this affection comport themselves in the same manner as serous membranes in other parts of the body—those of the joints, for instance—and may be attacked in the same manner. The lesion and process are the same in both. The same as that point which is the weakest is the one generally attacked in rheumatic patients, so the meninges are generally affected in those whose nervous system is weakened through whatever cause. Therefore, heredity is an important ætiological factor. Hysterical and epileptic patients seem to form an exception. Those addicted to alcohol, on the contrary, are frequently affected. The better class of patients are those most frequenty affected, for the reason that their brain is more used and that they suffer more from cere-

bral fatigue. Therefore, intellectual pursuits and severe mental effort act as exciting causes. The over-acute and acute forms are preceded by certain prodromal symptoms. They rarely occus before the fifth day of a rheumatic attack, generally between the fifth and twentieth. Exceptionally high temperature and intensity of cardiac manifestations are significant, but restlessness of the patient, moral anxiety, pre-occupation for the future, transitory delirium, and persistent insomnia are to be looked upon with the greatest apprehension. The over-acute form is sometimes preceded by one or another of these symptoms, but generally it attacks the patient with intense suddenness. This is the rarest of all the forms, having occurred only five times in sixty-nine cases of cerebral rheumatism. The acute form occurred fifty-two times in the sixty-nine. It is preceded by the various symptoms—the temperature rises, the pulse increases, muscular twitchings occur, and the delirium appears. The delirium is generally of a low muttering type, which is exceptionally followed by convulsions, either eclamptic or choreic. Soon somnolence and coma set in. Death may occur in from twelve to twenty-four hours, or may not occur for five or six days. The sub-acute form is the one generally known as rheumatic insanity or rheumatic mania. It is exceedingly rare, according to Simon occurring once among four hundred insane, and once among one hundred rheumatic; but Ball considers even these figures too high. This form generally occurs when the rheumatic fever is on the decline; sometimes, however, it sets in during the rheumatic attack itself. The first symptoms occasionally consist in a violent delirium, somewhat similar to the delirium of the acute form of cerebral rheumatism; but more frequently the cerebral affection takes on a melancholic or depressive character. The author cites various cases of this form. The most prominent symptoms are:

1. A depressive melancholic delirium.
2. Hallucinations, particularly of sight, but also of hearing, taste, smell, and touch.
3. A weakening of the intellectual faculties, always well marked, and sometimes permanent.
4. Choreiform movements.
5. A profound cachexia. Generally this form terminates in recovery. When death does occur, it is due to the progressive cachexia. The author then enters into the question whether rheumatic insanity is really a special form of insanity or a simple melancholia attacking persons so predisposed. This is decided by him in favor of its being a special form. "Rheumatic insanity is a reality."

A Case of Actinomycosis Hominis.

Before an English medical society, Dr. R. G. Hebb presented this case: W. H. aged 11, was admitted into Westminster Hospital on March 18th, 1886. He had suffered for a month previously from pain in the limbs, diarrhœa, vomiting, and "feverishness." On admission the most prominent symptoms were those of lung-consolidation and pleural effusion, for which he was tapped twice. Soon afterwards, pyæmic symptoms developed, and the patient died on June 2d, The post-mortem examination disclosed abscesses of the brain and meningitis, pneumonia, excavation of the lungs, and suppurative pleuritis. A large vegetation was found on the wall of the right auricle of the heart, and in the liver an

abscess and many areas of caseation. On microscopical examination of the liver, there were found numerous pigmented cells, many of which formed the centre for the departure of radiating filaments. The conjunction of these two factors gave rise to the appearance of a definite organism, for which the name of actinomyces was adopted. In the brain and lungs, collections of cocci only were found.

Dr. Sturges wished to express his thanks to Dr. Hebb for the trouble and care he had spent on this difficult subject. Many of his hearers would remember a case in which Dr. John Harley had made a very interesting attempt to show that in a case very similar to the present one, the pathological alterations were the result of degenerative tubercle. That had not been a view widely adopted, and it was inadmissible in the present case. He wished only to remark on the clinical points of the case. The patient, a boy of 11, was the youngest subject in whom these microscopical appearances had been found. He was admitted under his care for what looked like simple pneumonia. His temperature, after the time that the pneumonia might have cleared up, rose to 106.2°; hectic and wasting came on, and subsequent indications of a hepatic abscess, for which they had made exploratory punctures, but had reached no fluid. They had now three cases starting from the lungs, in which the symptoms were so similar that he thought it might be possible to diagnose the affection during life, and, though it was impossible to stop it, they might yet learn how to prevent it. The other two cases were related by Professor Israel in the *Archiv für Chirurgie*, and by Dr. Skerritt, of Bristol, in the *International Journal of Medical Sciences*. In these other two cases the disease was slower in its course, lasting about six or seven months, whereas their case did not last more than three and a half months.

Dr. C. T. Acland said the case in which he had discovered actinomyces, in specimens from a patient of Dr. John Harley, was the first recorded in England. He considered that the disease was not as rare as Dr. Sturges and Dr. Hebb seemed to suppose. He had himself seen four cases. In cattle, actinomycosis was a well-known disease; whether the rosettes to be found in their tissues were mycelium or not, was doubtful; whether they were the cause of the disease, was also doubtful. He thought the organisms in Dr. Hebb's microscopical specimens, which had been shown that evening, whatever they were, were not the origins of the disease; for they had too little inflammation about them. There were, possibly, various species of the actinomyces; for, though his own drawings agreed with Dr. Skerritt's, they did not agree with Professor Israel's or Dr. Hebb's. By Dr. Hebb's courtesy, he had been given some of the diseased tissue to examine, but had not been able to find any organisms in it.

Dr. Hebb did not wish to prolong the discussion unnecessarily. He had only brought three specimens, but he had many others. There could be no doubt about the existence of these radiated tufted organisms in this case.

Diathesis of Contracture.

M. CHARCOT has given the name "diathesis of contracture" to a special nervous state which is neither contraction nor paralysis, but partakes somewhat of both. M. Berbez was led in the following manner to observe the frequency of the "dia-

thesis of contracture" in hysterical subjects. M. Charcot, in a lecture on the intermittent lameness caused by the more or less complete local arterial anæmia of a limb, attributed to local obstruction the stiffness and more or less durable contracture induced in the muscles. In order to verify this hypothesis, he applied Esmarch's bandage to M. Berbez, and to several of his assistants, without being able to obtain contracture. During the application of the bandage to the right arm, for example, the patient was made to hold a dynamometer, and the muscles were fatigued by successive pressure, until the instrument marked but 5 or 6 degrees. In these experiments contracture never took place. The result was altogether different when the operation was practised on hysterical subjects. At the first turn of the bandage nearly all the patients were seized with contracture. This peculiarity suggested to M. Charcot that local obstruction in the circulation was not the cause of the phenomenon; in fact, the experiment was varied in different ways, and the result was the same in nearly all the patients. The bandage was at first applied from the ends of the fingers to the wrist, then to the elbow, and finally as far as the lower end of the deltoid. In three cases contracture preceded the bandage in its spiral course up the arm. It was then applied to the middle of the forearm and leg, contracture being produced as before. Constriction alone seemed to cause contracture; but, to make sure of this, the constriction was made as complete as possible, and the bandage allowed to remain for a few minutes. Little by little the stiffness decreased, until the muscles became thoroughly limp. The local anæmia caused by the constriction, when maintained for a long time, seemed to cause the contracture to disappear. Contracture produced by the bandage almost always ceased when the bandage was removed. In two instances, however, the phenomenon became general throughout the body, and in one subject only on the right ride, after the removal of the bandage. Contracture invaded within a few minutes both the arms and legs of a young girl, to whose right forearm constriction was applied. Massage was done at once and caused the rigidity to disappear completely. The phenomenon was sought for in all the hysterical patients in the ward and in those who came for consultation, and it was found to be extremely frequent. Out of seventy cases examined, contracture was induced in fifty-two, nineteen of these being men and thirty-three women. It was also found that in this respect the patients were capable of a kind of education. Those in whom contracture could not at first be produced were found, after repeated trials, to exhibit very decided muscular rigidity. The tendency was much increased by stimulating the tendons to action by percussion and by provoking direct muscular irritability, together with reflex excitement of the spinal cord before the application of the bandage. The "diathesis of contracture" was often found in patients who had never suspected its existence. A few, however, had observed that after throwing a stone they remained fixed in the same attitude, being, as it were, congealed; generally, however, the phenomenon was not discovered until sought for by the physician. It was also found that contracture was easily provoked in other ways than by the bandage, as, for example, by vigorous massage of the muscles, repeated shocks of the tendons, stretching the upper and lower limbs, faradization of the muscles or nerves, magnetism, and also by simply rubbing the skin. The bandage acts more rapidly only because it unites in itself all these different modes of excita-

tion. On the whole, it is possible to provoke in patients while awake contracture altogether similar to that produced in hypnotism. As the intensity of excitement required to produce the phenomenon varies in different patients, its appearance in cases of injury will depend on the severity of the latter. The knowledge of the "diathesis of contracture" in a patient may, therefore, serve to clear up many obscure points.

Report of a Case of Chronic Diffuse Nephritis, and the Efficacy of Basham's Mixture.

Dr. A. L. GIHON thus writes in the *Chicago Med. Jour.:* The efficacy of the mistura ferri et ammonii acetatis (U. S. P.) in the treatment of a case of albuminuria incident to chronic Bright's disease, recently under my care, was so pronounced that I feel that it ought to be brought to the notice of the members of the Society.

The patient, an officer, was admitted into the United States Naval Hospital at Washington, D. C., 28th of March, 1886, having been invalided from the U. S. S. Nipsic, at Montevideo, February 16, as with "Febris remittens." He had been transferred from the U. S. S. Enterprise on the 9th of January, his disease being stated to be the result of exposure to malarial influences during a former long cruise on the China Station. During his stay at Montevideo, he was found to have albuminous urine, œdema of the lower extremities, and dyspnœa.

At the Naval Hospital, New York, where he was first received on reaching the United States, his water was noted as "smoky, variable in quantity, containing from one-sixth to one-twelfth of its volume of albumen, with granular and hyaline casts. There was general œdema with consequent dyspnœa, spasmodic breathing, interference with heart's action, and pains in the extremities." He improved sufficiently to permit his transfer to Washington, at his own request, that he might be with his family; but the fatigue of travel proved more than he was able to undergo, and he arrived in a state of extreme prostration, his heart acting feebly and tumultuously, beating one hundred and forty to one hundred and sixty per minute—pulse scarcely discoverable at the wrist—temperature ninety-nine, features pinched, eyes pearly, skin dull yellow, surface cold, clammy sweat, tongue broad, moist, pale and cold to the touch, great præcordial distress, dyspnœa, excessive restlessness, moaning, hiccough, distention over lower pleuræ, tumid abdomen, almost complete suppression of urine, and incessant violent retching and vomiting.

He was put into a hot bath, dry cups applied over the loins, and the abdomen enveloped in hot turpentine stupes. Later the mistura ferri et ammonii acetatis, the use of which had been commenced at the Naval Hospital at New York, was administered in small doses alternately with boiled milk and lime water and repeated as often as it was vomited. This treatment, catharsis being at the same time established, was persisted in with such modifications as circumstances required. The irritability of the stomach gradually abated on the restoration of the secretion of urine, which on the 26th had increased in quantity to 300 c. c. during twenty-four hours, having specific gravity 1018 and containing ten per centum of albumen and on the 27th, to 500 c. c. specific gravity 1005, albumen six per centum; granular casts and fatty matter were abundant.

As the stomach and kidneys recovered their functions, the Basham's mixture was continued in larger doses at longer intervals, and on the 22d of May the patient was able to accompany his mother and sister to Missouri, arriving at their home on the 24th, after a rest at St. Louis. On the 25th he went under the professional care of Dr. Edward N. Small, of Sedalia, who wrote that he had accomplished the trip without much fatigue, complaining principally of dyspnœa. His urine amounted to about 800 c. c. in twenty-four hours, of specific gravity 1018, containing "a considerable quantity of albumen and fatty casts." On July 24th Dr. Small writes: "His urine has specific gravity 1022, slightly acid, average quantity daily thirty-four ounces (nearly 1100 c. c.), no casts and careful examination failed to detect the slightest trace of albumen. Improvement has been rapid during the last few weeks, his flesh has become firmer and of rosier color, all puffiness has disappeared from the face and swelling from the lower extremities. Some abdominal distention remains, but is much less than a week ago. The treatment by turpentine stupes, milk diet, with an occasional hydragogue cathartic and Basham's mixture has been adhered to. I am exceedingly glad to report so favorably."

This case, as also one other under my observation in a patient, whose antecedent history had a record, as this one, of alcoholic indulgence, demonstrates the usefulness of this very elegant combination of iron and ammonium acetate, the use of which, begun under unpromising conditions, was fortunately perservered in by the successive medical attendants with such satisfactory results.

Persistent Vomiting as a Cause of Ear-Troubles.

Dr. Charles Atkin thus writes in the *Brit. Med. Jour.:* As far as I am aware, vomiting is not usually included in the list of causes occasioning catarrh of the middle ear. It is well known that aural affections frequently complicate general wasting diseases, especially in their final stages. The pharyngeal muscles waste along with the rest of the body, and the sufferer's last days are aggravated by distressing tinnitus and vocal reverberation. The last symptom is most annoying. Whenever any movement occurs in the throat, nose, or mouth, the sound is conveyed to the tympanum up the unduly patent Eustachian tube, causing an unnatural ringing and roaring noise in the ears.

Wasting of the "constrictor sacculi pharyngis" and undue patency are sufficient, in many cases, to account for the symptoms complained of, but a further cause appears to have been lost sight of—that is, impaction of minute particles of regurgitated food or mucus in the tubes during the act of vomiting.

In the simple act of vomiting the contents of the stomach are not infrequently ejected through the nostrils, and the tubal orifice may easily become plugged. Should the act be repeated constantly, as often happens in renal and cerebral affections, the plug of mucus may be driven still further up till it becomes lodged at the narrowest part—at the junction of the cartilaginous portion with the bony part of the tube.

With the exception of Von Tröltsch's classical case, in which a grain of barley was discovered, post-mortem impacted in the pharyngeal orifice of the Eustachian tube, I know of no others where foreign bodies have been supposed to have gained entrance into the auditory apparatus through the pharynx.

The following case is interesting, as the patient accurately described his symptoms from the outset. During a violent fit of vomiting, in which some of the contents of the stomach poured out of the nostrils, he felt as if his right ear suddenly became plugged. He endeavored to ease the dull tickling sensation by inserting his little finger in the external meatus, but with no result. When I saw him next morning he was slightly deaf, and complained of his voice reverberating in his ear, and of a continuous throbbing, which he said felt "like a pulse in the ear." The drum was unaffected. Though instructed how to perform Valsalva's method, he derived no benefit, and could not force any air into the right ear, though he felt it in the left distinctly. Swallowing, yawning, coughing, sneezing, sometimes seemed to ease him for a minute or two, but the worry soon returned. Some days after the left ear went in exactly the same way, and I found that he could not hear the watch at half the proper distance. At this time the right drum appeared to bulge slightly below and behind, and the sense of having a drop of fluid in the ear seemed to depend on the position the head was held in. Whether any fluid ever gained entrance into the cavity of the tmypanum, or whether it was simply retained secretion, is impossible to say. As the patient was rapidly dying from an abdominal sarcoma, it was not considered justifiable to resort to any operative procedures for the restoration of the patency of the tube. The symptnms, therefore, persisted, the tubes remaining blocked to the last. Without any leading questions, the patient distinctly attributed the numb feeling in his ears to the vomiting. Deafness was not complained of, and no doubt he might have heard the watch had it not been for the subjective aural sensations which drowned all faint sounds.

A man with locomotor ataxy, after an unusually severe series of "gastric crises," noticed that he was deaf. Roaring noises in the ears were complained of, with stiffness behind the lower jaw. The throat was not inflamed, and Politzerization failed to move the drums, which were apparently healthy. Examination with the fork showed that the fault lay in the conducting apparatus. When seen a few weeks later, both drums were perforated, the man expressing himself easier since the ears began to run. Since then the tubes have been kept open, and the perforations have healed. In this case the blocking of the tubes was not due to inflammatory congestion as far as could be made out. A subacute inflammation did take place, but owing to the patient's irregular attendance, its course was not accurately watched. It may fairly be urged that his neurotic condition may have influenced the ear-affection, for neuralgic pains and tinglings in the face and head were constantly complained of.

The suddenness of the onset in both cases, and the absence of the usual cause of increased flow of blood to the middle ear, or of any irritation of the tensor tympani muscle, make it probable that the persistent vomiting had something to do with the causation of the distressing tinnitus and partial deafness.

Professor Virchow on Myxœdema.

It is a curious and interesting fact says the London *Lancet*, that the condition with which we have been familiar in this country for the past ten years under the name "myxœdema" is almost unknown in Germany, the home of scientific medicine. The clinical characters of the condition are so obvious that it was a matter

of some surprise when Dr. Ord first formulated them (following, it will be remembered, Sir W. Gull's observations on the "Cretinoid State in Women") that the cases should have been overlooked. To German physicians the present state of ignorance is the more significant, as it indicates a lack of knowledge of English literature, which is hardly reciprocated. In France the subject has been more studied, and M. Charcot some years ago suggested the alternative title of "cachexie pachydermique" as descriptive of it. Professor Virchow has, therefore, done a real service in introducing the subject of myxœdema to the Medical Society of Berlin, of which he is President (see *Berl. Klin. Woch.*, 1887, No. 8). He said that although the London Clinical Society had collected details of 110 cases, and many had been published in France, there were records in Germany of but two or three cases, and these of quite recent date. In his visit to London last October he enjoyed opportunities, especially at St. Thomas's Hospital and the Brown Institution, of becoming familiar with the disease; and his address was largely taken up with the interesting subject of its pathology as investigated by Professor Horsley. He had been convinced from inspection of Professor Horsley's preparations of the truth of his statement that lymphoid tissue occurs in the thyroid body; but, although accepting the fact that the blood in the thyroid veins is 7 per cent. richer in leucocytes than that in the corresponding arteries, he hinted that this difference may be explained by the slower current in the veins, and did not consider the lymphoid tissue to be adequate to entitle the organ to be considered of hæmopoietic nature. As to the nature of a myxœdema, he pointed out that adipose tissue, when atrophying, undergoes mucoid change—a reversion to the fœtal state; but that myxœdema is not a mere atrophic change. On the other hand, it is an outcome of an active process of the cell growth in the cutaneous and subcutaneous connective tissue, with increased bulk, whilst the superficial layers of the cutis are not involved. It resembles an inflammatory rather than an active process, and he was reminded of the similarity to the condition of phlegmasia alba dolens, or pachydermia. The experimental and chemical researches of Horsley and Haliburton, which proved that extirpation of the thyroid is followed by an increase of mucin in the blood, tissues, and secretions—a condition of "myxœmia"—form a distinct advance in the knowledge of the subject; but Professor Virchow expressed himself with caution upon the theory of the function of the thyroid propounded by Horsley upon these results. Nor does the histology of myxœdema bear out the notion of its being mainly a condition due to retention of mucin; on the contrary, it points to an active irritative process. Professor Virchow next passed to consider the relations between myxœdema and cretinism, and again cited Professor Horsley's experiments on monkeys, which in a few weeks after thyroidectomy passed through a series of stages—neurotic, mucinoid and atrophic—to death; and where, after exclusion of any nerve lesion, the phenomena were attributed to perverted nutritional changes. He called to mind the ill-effects, noted long ago, of the too rapid wasting of the thyroid under treatment of goitre by iodine—effects attributed by some to iodism, but considered by Virchow himself (*Geschwülste*, i., 114) to be due to the "goitrous cachexia." He discussed the association between goitre and cretinism, and between so-called "congenital rickets" and cretinism, with especial reference to myxœdema, ad-

ducing some interesting facts, such as that of two infants, subjects of "congenital rickets": one presented the characters of myxœdema, and had an abnormally large thyroid; the other was small and atrophied, having no myxœdematous characters, but having extreme atrophy of the thyroid, such as described by Ord in myxœdema. He also referred to Küster's observation upon "cachexia strumipriva," and glanced at the subject of exophthalmic goitre, more by way of contrast than as illustrating any relationship between Graves' disease and myxœdema; and he concluded by admitting that although the part played by the thyroid body in myxœdema was not yet proved, it was a subject worthy of careful study. Professor Ewald, who spoke on the conclusion of Professor Virchow's paper, preferred "cachexia pachydermica" to the term "myxœdema," and suggested that in Horsley's experiments the increase of mucus in the salivary secretion was attributable to injury to the sympathetic during the operation of extirpation of the thyroid. He mentioned that recently Schiff and Herzen had observed spasmodic affections suggestive of cortical irritation to follow extirpation of the thyroid, whilst Albertoni and Tizzoni had noticed a great diminution in the blood-capacity for oxygen; and he considered that such varied results proved how far we are from a knowledge of the functions of the thyroid. Drs. Wolff and Bergmann also spoke, their remarks being mainly directed to the effect of partial thyroidectomy in producing atrophy of the remainder of the body—a result which does not obtain in experiments on the healthy organ.

Glycosuria—Its Forms and Causes.

Dr. O. C. DeWolf thus writes in the *Medical Standard*: The recent deaths from glycosuria of Vice-President Hendricks, General Hancock, David Davis and President Arthur, have attracted much attention to this disease.

In a discussion on glycosuria before the recent Congress for Internal Medicine, Hoffman expressed the opinion that there is a marked relation between diabetes (glycosuria) and the nervous system, and that there are two forms, the neurogenic and the fatty. The first is characterized by the absence of obesity, of carbuncles and furuncles, and the absence or rare appearance of albuminuria and cataract. The course depends on the nervous complications. The incurable cases prove fatal within two or three years. The fatty form is frequently associated with boils and carbuncles, gout and nephritis, and the disease lasts often ten years and over. The neurogenic is the type of the accidental, the fatty of the constitutional form. There are, however, many "lean" constitutional cases and fat accidental cases.

Finkler, of Bonn, however, does not think these two forms can be separated, since the nervous system regulates the production and consumption of glycogen.

As I stated some years ago, the peculiarities of the complications of glycosuria can be best explained on the vaso-motor neurosis theory of the disease. Phthisis of the kind found in glycosuria is a very frequent complication of the vaso-motor psychoses; true nephritis is as infrequent in them, despite very favorable circumstances, as it is among glycosurics.

Ross says: "The vaso-motor nerves of the liver take their origin on the floor of the fourth ventricle and pass through the cervical and upper dorsal regions of the spinal chord and the *rami communicantes* opposite the fourth or fifth

dorsal vertebra, to join the sympathetic, and ultimately enter the organ as the hepatic plexus. Injury to the fibres at their origin in the fourth ventricle, in any part of the spinal chord, or of the sympathetic itself, is followed by glycosuria." Frumet de Fontrace is of like opinion. On careful examination there is found precedent to most of the cases, cerebral hyperæmia from overwork or anxiety, and at the same time extra strain on the digestive apparatus. In certain cases predisposed by heredity or injury these two influences act in a vicious circle; the hyperæmia acts on the cerebral vaso-motor centre to increase the digestive difficulty and to produce *per se* glycosuria. The digestive difficulties act through the vaso-motor centre itself in an indirect manner, as explained by Senator, to cause glycosuria. From this inter-action in a vicious circle, the vaso-motor centre becomes perverted and glycosuria remains a permanent condition. In a second class of diseases digestive difficulties arising from mental overwork produce cerebral anæmia, which results in changes of the functions of the pancreas and intestines, and finally in the structure of those organs, already weakened by digestive strain. The cerebral anæmia interferes with the function of the cerebral hepatic fibres, and at the same time a gastro-intestinal condition reacts on the cerebral condition, and the lean form of glycosuria is the result. In some cases tuberculosis is the origin, at once, of the intestinal and cerebral conditions.

In conditions in which marked cerebral circulatory changes occur, whether from the administration of drugs, from pyrexia, or secondary neuroses, glycosuria may occur which may be of temporary duration, may present mild constitutional symptoms, and disappear without special treatment.

The fact that senility gives rise to an intermittent glycosuria shows the error involved in the report of mild cases of glycosuria, occurring after sixty, as being cured by treatment. The existence of a hysterical type of glycosuria explains the frequent cures of "mild cases of glycosuria in women." The existence of a mild type of glycosuria related to gout seems to lend probability to the view of Bence-Jones, that gout and glycosuria were diseases of sub-oxidation. While this is not impossible, the origin of the sub-oxidation still requires explanation, and Dyce-Duckworth has shown that gout itself is a trophoneurosis.

It is evident: That the apparent improvement of glycosuria under treatment in a paretic dement, an epileptic, hysteric, a pregnant woman, gouty individual, or an old person, is not of value as evidence of the influence of such treatment on glycosuria, since any of these conditions may give rise to a permanent glycosuria of a mild type.

Coma is the response to a sudden strain upon an unstable vaso-motor system; the instability of which is due to the constitutional condition which produces glycosuria the neuro-patho-anatomical changes found by Pavy and Dickinson and Hoffman show that decided vaso-motor perturbations mark the course of the disease, the aforesaid changes being obviously secondary to these.

In all probability, therefore, diabetes or glycosuria (which is the preferable title) is divisible like all other neuroses into an active furibund and a slowly progressive type. The treatment should thence be directed to the management of the particular case rather than the disease. The treatment of the coma will vary with the type presented. Arsenic bromide, recommended by Drs. Tyson, Leube, Gilliford, Clemens, Dr. N. S. Davis, and myself, has been found to be the most

generally indicated of any of the remedies. The dietetic treatment prescribed in Tyson's table merits recommendation.

Hygiene in most cases would consist in a recommendation of mental quietude and of avoidance of undue emotional strain, such as results from the strife to excel in business, academic and professional life, which, as Dr. C. K. Mills has demonstrated, is a fertile source of glycosuria.

Experiences with Drumine as a Local Anæsthetic.

Dr. ALEXANDER OGSTON thus writes in the *British Med. Jour.:* On January 6th, 1887, I received from John Reid, M. A., M. D., of Port Germain, South Australia, a copy of the *Australian Medical Gazette*, of October 15th, 1886, containing a paper by him on "Drumine: a new Australian Local Anæsthetic," and a box containing 40 grains of drumine. The drug was in the form of a semi-crystalline, waxy mass, of a greyish-white color. Dr. Reid requested that the drug should be submitted to trial as to its anæsthetic properties.

Twenty grains of it were, on January 7th, dissolved by boiling in equal parts of absolute alcohol and water, and filtered, the strength of the solution being 4 per cent. of drumine. It tasted faintly of apples on the tongue, and caused a slight feeling of tingling and harshness where it had been applied to that organ. Next day, January 8th, 4 minims of the solution were injected hypodermically into patients who were about to be subjected to operation, one for gouging out of tubercular cervical glands, and the other for the opening and scraping of a chronic cervical abscess. The injection was made at 10.45 A. M., in the immediate neighborhood of the diseased parts. At 11.45 A. M., when the operations were performed, no anæsthesia was observable, and the patients were therefore rendered insensible by chloroform until the operations were completed. At this time (11.45 A. M.), 4 minims were injected hypodermically into the backs of the forearms of Mr. Middleton, student of medicine, and myself. A quarter of an hour, half an hour, and an hour later, neither of us was aware of any diminution of sensation on or near the injected site, but pretty smart pain was felt, which lasted for several days, and then disappeared. During the afternoon of the day of injection, Mr. Middleton felt as if under the influence of a small dose of morphine. I was unconscious of any unusual feeling, save the pain and tenderness at the injection site.

Next day, January 9th, the remaining 20 grains of the drumine were dissolved in pure water by boiling, and the solution filtered, the strength being as before, 4 per cent. of drumine. On January 12th, 6 minims of this solution were injected hypodermically into the back of each of our other forearms; no anæsthesia resulted, but a sharp aching pain was felt in the arms, lasting a day. The pain diminished sensibly on the following day; but the site of the injection showed an area of firm swelling and tenderness over a spot the size of a crown-piece (a phenomenon not observed in the alcoholic solution). This remained tender and swollen for weeks, but gradually became less so; yet even so late as February 8th, a flat area of induration, with slight tenderness, was very evident at the injection site in both of us. At the same time as the injection a drop of the solution was instilled into my own conjunctival sac, and into that of Mr. Riddell and Mr. Williamson, students of medicine. No anæsthesia of the cornea or con-

junctiva was observable in any of us. It had no perceptible action on the pupil or accommodation.

On purpose to institute a comparison between the effects of this drug and of cocaine, Mr. Middleton and I subjected our forearms to the action of cocaine. On January 29th, at 12.25 p. m., 5 minims of a 10 per cent. solution of cocaine were hypodermically injected into the back of each of our left forearms. The act of injection was much less painful at the moment than that of either of the solutions of drumine. After five minutes (at 12.30), a patch of skin over the spot elevated by the injection, the patch being ¾ of an inch in greatest diameter, oval in shape, with its long axis corresponding to that of the forearm, was anæsthetic to the prick of a needle, while the sensibility around was perfect. At 12.43 the anæsthesia was so complete on the patch that incisions, made slowly and deliberately down to the aponeurosis of the forearm, caused no pain in my case, and only slight discomfort in that of Mr. Middleton. At 12.45 the wounds were sutured, painlessly to me, and nearly so to Mr. Middleton, in whom the anæsthesia was throughout less perfect than in myself. At 12.50 the above patches became surrounded by an area of rosy redness, over which sensation was decidedly diminished. These areas increased in size, were oval in shape, and extended down the forearm from the point of injection, but scarcely ascended above it at all, and were on Mr. Middleton's arm of a rounded oval shape, on mine more of a ribbon form. At 12.50 their measurements were 2 by 3½ inches in Mr. Middleton, and 4 by 1½ inches in me. Surgical needles could be passed through the skin with little pain, and an incision was made in my forearm down to the aponeurosis, without intolerable discomfort. The suturing of this incision was disagreeable, but not actually painful. At 1 P. M. (25 minutes after the injection), these areas of deadened sensation occupied one-half the circumference of the forearm, and everywhere within them the sharp points of a pair of dressing scissors could be scored over the skin, so as to scarify it, without causing actual pain. Sensation of contact however remained, and was never entirely abolished. This was possibly due to the movements communicated to the deeper parts. The anæsthesia corresponded pretty closely to the area of redness of the skin. In Mr. Middleton a secondary patch of complete anæsthesia appeared for a short time, 2 inches below the injection site and was, like the patch there, of oval shape, and about ¾ of an inch in greatest diameter. The anæsthesia faded more rapidly on my arm than on Mr. Middleton's. The wounds made began to smart badly at 2 P. M. with me, in Mr. Middleton's arm not until 3.30 P. M.; or three hours after the injection.

It seemed as if the insensibility were due to a gradual diffusion of the cocaine through the subcutaneous tissues from the point where it was introduced. The wounds made under cocaine healed badly in both our arms, showing more inflammation, induration, and pain than should have been expected on my arm, while, on Mr. Middleton's the wounds suppurated superficially. In neither of us was the induration gone on February 8th, that is, ten days later.

These experiences indicate pretty clearly that, as a local anæsthetic, drumine has little, if any, effect, and certainly cannot be compared with cocaine. It is possible that the drumine supplied to me may have been altered in composition or have otherwise lost its effect during its prolonged transit from the Antipodes.

VI. OBSTETRICS, DISEASES OF WOMEN AND CHILDREN.

Gonorrhœal Infection in Women.

Dr. F. SCHWARZ, in the *Sammlung Klin. Vorträge*, No. 279, calls attention to the very important relation of many affections of the uterus, ovaries, Fallopian tubes, and the peritoneum with previous gonorrhœal infection in women, as shown by the researches of Nöggerath, Sänger, and others. The paper is a very excellent one, but too extensive to receive adequate attention within the limits of our space. He strongly urges the physician to treat gonorrhœa thoroughly in women, and not to leave cases to themselves, as is so often done, with the great probability of developing some of the serious complications and consequences above noted.

Use of Lanolin in Midwifery Practice.

We notice the following in the *Cincinnati Medical News:* "Dr. C. CLARK BURMAN calls our attention through the *Lancet* to lanolin as a particularly efficient means of reducing the rigidity of the perineum in primiparæ. Owing to its penetrative and softening properties, he finds it much preferable to the plan adopted of friction with pure lard. Only recently this rigidity was strongly marked in an elderly primipara, where the forceps were required on account of debility on the part of the patient. He was surprised with what facility he succeeded in reducing it, so as to enable him to apply the forceps much sooner than he should otherwise have felt justified in doing, on account of the danger of severe laceration."

Hasheesh and Belladonna in Whooping-Cough.

VETELSEN (in *Centralblatt fuer Klinische Medizin*) gives the following:

℞	Extr. Cannabis Ind.	gr. xv
	Extr. Belladonnæ.	gr. vij
	Alcohol Absol.,	
	Glycer	ää ʒiss

M. Sig.—For infants under 1 year, four to five drops; children from 6 to 12 years, ten to fifteen drops; adults from fifteen to twenty drops; intermediate ages in proportion. The medicine should be given in ordinary cases only at night on retiring. In severe cases it may be repeated in the morning.

Case of Pregnancy after Extirpation of Cervix.

In his last clinical lecture, given on December 18, before vacating the Chair of Gynæcology, Professor PAJOT took occasion to alude to a case which had been

admitted into the Maternity Hospital in which the midwife could not succeed in discovering the cervix. It appeared that two years previously the woman had undergone Huguier's operation for "conical cervix.' In its place all that could be discovered was a patch of dense, resisting, cicatricial tissue, in the centre of which existed a small depression not very perceptible to the touch, and not easily found with the speculum. The pains had begun on the day previously, but did not seem to be proper labor pains. It was decided to wait, and to intervene only when such a course was evidently called for. The result proved the justice of the course.

Pruritus of Women.

Dr. CHÊVON, in *Le Progrès Médical*, after showing how intractable many of the cases of pruritus are, states that of all the remedies proposed veratria is by far the most efficacious. When the pruritus is localized at groins, arm-pits, walls of the abdomen, or behind the ears, gentle friction night and morning with an ointment consisting of 30 parts of lard and a quarter of a part of veratria usually gives relief. When the pruritus is generalized, the internal administration of the veratria is preferable. Two centigrammes should be made into ten pills with liquorice powder, of which two to six should be taken daily, either half an hour before or three hours after meals. Only one should be taken at a time, an additional one being given each successive day until the maximum of six (three milligrammes) is attained.

Asses' Milk for Infants.

The administration of the Assistance Publique (*British Medical Journal*, February 19, 1887), has decided to employ asses' milk at the Hôpital des Enfants Assistés for infants suffering from hereditary contagious diseases. Owing to the dangers incurred by women in nursing such children, the Administration substituted goats' milk for human milk; but the infants did not thrive upon it. The Administration has now provided ten asses, which are kept in the stables of the hospital, with their young. Each ass is capable of nourishing three children besides its own young for the first three months, and two children for the two following months. After this period, it is capable of nourishing one child until the ninth month. Eight children are being nourished in this manner at the present time.

Lubricant for Speculum.

BRONDEL (*Gazette de Gynécologie*) commends as an antiseptic lubricant for instruments intended for insertion in the vagina a pomade thus constituted:

Boracic acid,	
Essence of eucalyptus	āā 10 parts.
Vaseline	100 "

For application to the hands he employs a more strongly antiseptic compound of vaseline and sublimate (1:1000) containing 10 per cent. of the essence of eucalyptus. The odor of the last-named constituent is found to mask that of the vaginal secretions, which is occasionally so tenacious and penetrating. The mixture last mentioned is, however, inapplicable to metallic specula, as the surfaces become tarnished under its use.

A Domestic Nipple-Shield.

Dr. FRANK HOLYOKE states in the *Boston Medical and Surgical Journal*, February 24, 1887, that a patient who suffered from extremely sensitive fissured nipples, invented for herself most perfect nipple-shields, by suspending from a ribbon about the neck, two deep wire tea-strainers. They were held in place by a properly-fitting waist, and the nipples, thus covered, were entirely free from any irritation. She had, moreover, such a copious supply of milk, that it was otherwise quite impossible to keep the nipples dry. This was remedied by the ready passage of the milk through the wire gauze to a layer of absorbent cotton covering the tea-strainer. Not until she began to employ this method of protecting the nipples did the process of healing go on satisfactorily.

This young mother's clever device has been a source of great comfort in a number of similar cases which have since then come under Holyoke's care.

Tartar Emetic in Labor.

In a paper on "Neglected Remedies" (*Philadelphia Medical Times*, September 18), Dr. Caleb Green, of Homer, N. Y., writes: Tartar emetic is one of the most efficient agents in promoting parturition. When the pulse is tense, the os rigid, the skin dry and hot, the advance of the head slow, I have seen, by the use of small doses of antimony, the most prompt and happy change for the better. The pulse softens, the skin becomes moist, the rigid os relaxes, the vagina becomes bathed in a plentiful supply of mucus, and the uterine contractions hasten on to a speedy termination of the labor. It is not a substitute for ergot, but it has properties which make it much oftener available as a means of hastening labor to a happy termination. If the dose can be graduated so as to produce its effects as a parturient just short of nausea, and especially short of vomiting, the effect seems to be better than where vomiting occurs.

Cocaine Anæsthesia During Child-Birth.

Dr. W. FISCHEL relates his experience before the Society for German Physicians in Prague, in the use of cocaine as an anæsthetic in child-birth. So far, in Germany, only one, E. Fraenkel, has made and published such observations. He painted a four per cent solution of cocaine or salve on the cervix and the upper part of the vagina during dilatation, and during expulsion the lower part and the hymen and vulva. In thirteen out of fifteen cases he had very favorable results. In five cases he noticed three different times the anæsthetic action of cocaine. He used a 2.5 per cent. solution in the same manner as did Fraenkel, and after each painting he obtained a condition of anæsthesia lasting about twenty minutes. In only one case did he use chloroform, and that only to the amount of a few drops. He observed that only very little of this was necessary. The cause of a negative result in two cases was unknown to the author.

Relation of the Sex of Children to the Age of Parents.

PROFESSOR KISCH, of Prague and Marienbad, has a paper in the *Centralblatt für Gynäkologie* for January 22d, 1887 (quoted by the *British Medical Journal*), upon this subject, in which he gives the following as a result of the facts gleaned from the statistical tables presented in it. When the husband is at least ten

years older than the wife, and when, at the same time, the wife is within the age of highest reproductive power (twenty to twenty-five), there will be a very distinct excess of boys born over girls. This excess will be marked, but less distinct, when the husband is at least ten years older than his wife and she is over twenty-six. When the husband is older than the wife, and she has not attained the age of highest reproductive power, the female births will be in excess. The excess of girls born over boys is most marked when the husband and wife are of the same age. Yet, when the wife is the elder there is a distinct excess of male births.

Successful Tait Operations.

The College and Clinical Record says that: At a recent meeting of the Obstetrical Society, of Philadelphia, Dr. CHARLES MEIGS WILSON reported three successful Tait operations. These cases are the first of a series performed without the use of carbolic acid solutions for instruments, and without the spray. Hydrant water boiled for six hours was used for the instruments and sponges in the first and second cases, and a solution of mercuric chloride, 1 to 8000, for like purposes in the third. The wounds of all three were dressed after the manner of Keith. The incisions were less than two inches in length. More than three months have elapsed since the operation in each case before it has been reported. It has seemed best to publish the cases in this manner, because the vast majority of all cases recover without accident from the operation, and hence mere statistics of the healing of the wound amount to little but evidence of individual skill. Statistics of the real relief afforded by the operation is what the profession needs in order to give the operation its just place in modern surgical procedures.

Belladonna in Sterility of Females.

There are few drugs (says the *New York Medical Journal*) which exhibit so pronounced a predilection to act upon certain structures of the body as belladonna. Among its favorite tissues, those of the female sexual organs may be mentioned. Its employment is followed by more or less benefit in every disease to which these parts are liable. I suppose it has fallen to the lot of almost every practitioner to be consulted by married women who were never pregnant as to the cause of their barrenness. Apparently they enjoy the best of health, and have never suffered from any irregularity of the sexual apparatus. To such I have on several occasions prescribed belladonna internally, and have found that after taking the medicine for some weeks, they became pregnant. I have seen this happen so often that I am constrained to regard the occurrence as something more than accidental. I shall not venture to theorize upon its action, but will merely mention that I have observed that the external genitalia become more relaxed, and the os and cervix uteri somewhat softened and pliable, during the treatment.

Cases of Peculiar Pruritus of the Female Genitals.

Dr. L. PROCHOWNIK, of Hamburg, reports three cases in which pruritus was limited to the skin of the outer surface of the labiæ, and on one side, the vaginal mucous membrane appearing not to be all involved. Atrophic alterations of the skin were present, and the hair of the vulva was prematurely gray.

There were also, in one case, on the labium majora of the affected side large varices: in the second, in which the itching ceased during pregnancy and lactation, there were some hard scars in the lower part of the vulva; while in the third there was marked leucorrhea.

Dr. P. thinks that in most cases of pruritus of the female genital organs, neither the chemical action of the secretion nor the local alternations of the vulva are the primary cause of the itching, but that this is to be sought in the course of the sensitive nerves, the point of the irritation in which is to be sought far removed from the local disturbance. Hence the futility of local treatment, while internal medication is at times useful.

Tonsillar Ovaritis.

In support of the facts advanced by Dr. JOAL (*France Médicale*, July, 1886) on the concurrence of affections of the reproductive organs during tonsillitis, Dr. Bourgarel brought forward the case of a young woman, 24 years of age. The patient had had one child two years before, and was subject to tonsillitis. She had a tendency to anæmia, and was highly impressionable, and even hysterical. She took cold, shivered, had pain in the limbs, and difficulty in swallowing. On June 21 her tonsils were much swollen, and the left one was ulcerated. The uvula was also involved. Temperature between 38° and 39° C. Sleeplessness, loss of appetite, etc. At the time of the coming away of the sloughs the patient, then convalescent, had a very violent hysterical attack, followed by sharp pains in the loins, radiating through the pelvis, and specially marked in the ovarian region. The patient, usually regular in her periods, menstruated the last time about a week before her illness. She had no swelling of the parotids, nor did she remember ever to have had any. The ovarian pain was equally severe on both sides, but yielded to warm and calming applications. She ultimately completely recovered.

Phimosis in Infancy.

In the *Lancet*, Dr. Hett contributes a few remarks on the subject of phimosis in infants. The author suggests the following rule for those who take charge of midwifery cases: To examine every male child within a few days of birth, and if the prepuce can not be retracted by the exertion of a moderate amount of force, to perform circumcision on or about the eighth day after birth. Many an unfortunate little boy is credited with bad temper, and punished for naughtiness, whose irritability is due to neglected phimosis. There is also much reason for thinking that the old habit of masturbation is frequently led up to by a morbidly excitable condition of the sexual organs due to phimosis. Circumcision may be performed by seizing the extremity of the prepuce between the finger and the thumb of the left hand, drawing it well forward, and slicing it off diagonally downward and forward, just in front of the glans. The mucous membrane should then be split along the dorsum, quite up to the cervix, turned back, and retained in position by a narrow strip of dry lint wrapped firmly three or four times round the penis. No sutures are necessary. The lint can be removed in a few days, when generally the wound is quite healed.

The Infection of Wet-Nurses by Syphilitic Sucklings.

Professor FOURNIER, of Paris, (*Brit. Med. Journ.*, February 19, 1887,) in a clinical lecture, recently gave the history of a case in which an apparently perfectly healthy wet-nurse became, a fortnight after commencing her duties, the subject of an ulceration on the nipple, subsequently recognized as syphilitic. This, in the meantime, was naturally communicated to the infant. On inquiry, no history of syphilis could be traced, either on the part of the nurse or the parents of the infected infant; but it was ascertained that the nurse had already suckled an infant which had succumbed to symptoms of undoubted syphilis. At the time, therefore, that she accepted the second engagement she was already infected, but the disease was in the period of incubation. Dr. Fournier said he had met with fourteen cases of this description, and advised greater care in the selection of wet-nurses. Two precautions were specially indicated, namely, to engage no woman who had suckled any other than her own child; and if this were not practicable, to require a medical certificate of the last infant's immunity from contagious disease.

Heroic Dose of Turpentine in Croup.

In an obstinate and dangerous case of diphtheritic croup, which had extended into the larynx, *Lancet*, February 5, 1887, after painting with boracic acid, and subsequently with a chloric acid application, without benefit, the child's condition becoming worse and worse, Dr. LEWENTANER, of Constantinople, before resorting to tracheotomy, remembering a paper by Demlow in which turpentine was recommended in these cases, determined to give it a trial, and so administered with his own hands a teaspoonful of the pure oleum terebinthæ, giving after it some warm milk. In a quarter of an hour the labored laryngeal breathing had given way to normal respiration sounds. That night the child slept well, and was quite free from the brassy cough which had previously been present. The next morning he was quite lively, and was found playing with his toys. All trace of false membrane had disappeared from the pharynx, which merely presented a reddened surface. Convalescence was rapid and uninterrupted. The turpentine, however, caused an eruption on the face, trunk, and extremities, having much the same appearance as the rash of measles, but of a brighter red. The spots completely faded in two days, and were followed by no sign of desquamation.

Prolonged Gestation.

Dr. STEELE BAILEY (*Archives of Gynecology*) reports a case of gestation extending over ten months, followed by the birth of a fœtus thirty-three inches in length and weighing seventeen pounds. Labor was naturally very tedious, and the child died during delivery. Dr. S. K. Jackson reports a case in which gestation extended from July, 1884, to September, 1885, ending in the birth of a child weighing eight pounds. Dr. Rossie has related the history of a case of gestation induced by a single intercourse, extending over 317 days. The child, which was delivered by forceps, was a male, measured a little over twenty-one inches in length, and weighed rather more than twelve pounds. It died six hours after birth.

Dr. S. C. CHESTON MORRIS reported to the Academy of Medicine the following

case, which occurred in his practice in 1857. (*Medical Times.*) He found the patient, contrary to her belief, three months pregnant in May; she quickened about June 20, and presented no unusual symptoms until the 20th of August, when she fell down a flight of stairs and soon lost a large quantity of blood. The motions of the child ceased from three to four weeks, when they recommenced feebly at first and afterwards stronger, which continued until delivery, April 18, 1858, there being nothing abnormal about the child. Dr. Cheston is positive that the woman carried the child fourteen months.

Decoction of Cotton-Root as a Uterine Hæmostatic.

The experience of Dr. GARRIGUES, a most capable and conscientious observer as reported in the *Quarterly Bulletin* of the Clinical Society of the New York Post-Graduate Medical School and Hospital, apparently conclusively proves that decoction of cotton-root is a remedy of great value. Dr. Garrigues has used it in one hundred and thirty-nine patients, and in the majority he obtained more or less decided benefit. He finds that it lessens the pains, checks the bleeding from uterine fibroids; in sarcoma and carcinoma it lessens, or suspends altogether for a time, hæmorrhage. The remedy should be used in the form of a freshly made decoction. It will fail to produce any benefit in about one in ten cases.

The following directions are given for preparing and administering the preparation: Three heaping teaspoonfuls of the powdered root are boiled in a pint of water for fifteen minutes; after cooling, the preparation is strained; one-third of the decoction is taken in the forenoon, another in the afternoon, and the last at bedtime.

Intra-Uterine Medication.

The *Medical Register*, March 12th, says the methods of treatment so universally pursued by the gynæcologists of to-day are forcibly commented upon by EMMET in a recent article on "Certain Mooted Points in Gynæcology." He takes occasion to condemn it a most unqualified manner the present heroic measures, such as the use of strong solutions and the curette upon the lining membrane of the uterus and cervical canal, and contends that not only are such procedures often non-curative and sometimes dangerous, but that convalescence under such conditions is unduly prolonged. It is contended that, as a rule, endometritis is not a purely local affection manifested by a diseased mucous membrane, but that the latter phenomenon is only the expression of impaired uterine functions of which pelvic congestion is the principal cause. All remedial measures, therefore, which are destined to act locally upon the interior of the uterus, are unscientific, and at the same time of doubtful utility. There is undoubtedly much truth and sound sense in the views of this distinguished specialist, and those addicted to meddlesome procedures would do well to modify them and at the same time give more careful attention to general and constitutional treatment.

The Treatment of the Third Stage of Labor.

The *Med. News*, March 12, says experiments, conducted lately in some of the large lying-in hospitals of Germany, to determine the relative merits of the expectant or Ahlfeld's treatment of the third stage of labor, and of the expression

of the placenta according to Credé's method, have seemed to demonstrate the superiority of the latter plan of treatment. AHLFELD, however, in the *Centralblatt für Gynäkologie*, claims that his method has not been fairly treated, and explains again that his plan is to leave the uterus untouched for an hour and a half after the birth of the child, and then, if the placenta has not been already expelled, to express it, while the well-known method of Credé, on the other hand, consists in expressing the placenta during one of the first two or three pains after the birth of the child.

The lesson to be learned by the practical physician from this discussion, is that here, as in so many other instances, his safest course lies in *mediâ res*. While it is usually unnecessary to express the placenta the minute the child is born, it is still less desirable to allow the woman to lie half delivered, in what has been happily called the squalor of labor, for an hour and a half. If a choice is to be made between these two methods, it will certainly incline more toward that of Credé than that of Ahlfeld.

Hæmorrhage During Pregnancy, Probably Due to Separation of Placenta.

Dr. M. G. BIGGS thus writes to the *Lancet:* Mrs. M——, aged thirty-eight, mother of seven children, was confined of a healthy boy on September 30, 1886. There was no hæmorrhage of any unusual kind during the labor. Forceps were used after the membranes had been ruptured, owing to the uterine inertia. She has always had tedious labors. Early in January, 1886, she was regular; she then saw nothing until about the middle of February, when it came on rather suddenly and freely whilst she was standing in the shop, her husband being a dyer. From that time up to about a week before the confinement she used to bleed every fortnight or month, and even between these times there was often a blood-stained discharge. In July she sent for me; but rest in bed and the use of gallic acid and digitalis internally set things right for the time, and I heard nothing more of her until the day of labor. She had never been at all like this on any previous occasion. On removal of the placenta, one part of the zone was of much lighter color than the other, with partly decolorized clots, and these same partially decolorized clots were clinging to the corresponding outer surface of the membranes. The appearance was most characteristic. The sudden onset looks suspicious, but then it was so early in the case when it commenced, before the formation of the placenta.

Pregnancy in an Imperfectly Canalized Uterine Cornu.

Dr. NETZEL mentions, in a Scandinavian journal, a rare case of pregnancy occuring in the imperfectly canalized half of a bicornate uterus. The movements of the child had ceased in the thirty-third week of conception, and from that time the woman became thin and felt ill. Five months later Dr. Netzel was called in. The diagnosis was uncertain. He could not find anything corresponding to an extra-uterine pregnancy, and it was clearly not a normal intra-uterine one. He performed laparotomy, and thus discovered that conception had taken place in the right half of a bicornate uterus. An elastic ligature was applied round the base of the tumor. The uterus was opened and a macerated fœtus extracted.

The half of the uterus was amputated with the tube and ovary. All went well until a month after the operation, when an abscess formed in the cicatrix of the abdominal wound, which was followed by a fistula. A quantity of silk and elastic ligatures came away a month later, and the woman ultimately recovered completely. Dr. Netzel thinks the rarity of such cases causes them to be confounded with extra-uterine pregnancies, and with the "missed labors" of English obstetricians. He is of opinion that a more frequent resort to laparotomy would be of much service in throwing light on the subject. He mentions eight more or less doubtful cases as occurring in literature, including one reported by Dr. Keith, of Edinburgh.

Asafœtida in Abortion.

We learn from the *Medical Record* that Professor PAOLO NEGRI reports in *Lo Sperimentale* several cases of habitual abortion which he successfully treated with asafœtida. In all these cases the women had become pregnant several times and had aborted at various terms before viability of the child, and in spite of all tried methods of treatment. The treatment finally adopted is outlined in the report of the following case:

"The second case was that of a lady who had four miscarriages in succession, none of her pregnancies ever having gone on to term. When in the third month of her fifth pregnancy, she was seen by Dr. Negri. No signs of syphilitic disease could be discovered in herself or her husband, nor was there any other apparent cause for the repeated abortions. Asafœtida was at once ordered, and the patient persevered in the treatment, taking toward the end of her term as much as 18 grains of the gum resin per diem. The pregnancy was uninterrupted by any accident, and went on to full term."

The results in the other cases were equally good, and though the cases were only few in number, they are sufficient to warrant use and trial of this plan of treatment. A plan of treatment that will give fairly uniform and satisfactory results in this trouble is much wanted. Probably the most commonly employed remedy in this country is black haw (*Viburnum prunifolium*), and possibly the two remedies might be combined to advantage.

Adulterated Milk as a Cause of Infantile Diarrhœa.

Dr. A. J. SINCLAIR thus writes in the *Brit. Med. Jour.*: Permit me, through the medium of your columns, to direct the attention of your readers, and more especially the medical officers of health, to a probable source of danger to infantile life at this season of the year.

It is a well-known fact that at this time cattle are being fed principally on turnips, and that this method of feeding has the effect of producing in the milk of cows a peculiar taste, disagreeable to the majority of people. In order to destroy this peculiar flavor in milk, cow-feeders and dairymen are in the habit of adding a certain proportion of nitrate of potash. The amount added is small, and doubtless harmless to adults; but I am satisfied it is not so to infants, and especially to those susceptible to disorders of the alimentary tract during the period of dentition. A number of cases of infantile diarrhœa have directed my attention to this matter, these cases being intractable until such time as the cow's milk was replaced by condensed milk, or some other variety of infants' food.

I consider this matter of some importance, and should like to draw the attention of public analysts to this common and well known adulteration. Nitrate of potash has been used as a poison to children. Dr. Littlejohn has ably shown with what extreme virulence it acts as an irritant poison in such cases.

I shall be glad to hear if any of our members have met with intractable diarrhœa among children at this season, and if they can trace the cause to this form of adulteration.

Pelvic Hæmatocele.

In his recent Ingleby lecture on this subject, Mr. LAWSON TAIT summarizes his views as follows: We come, then, to the following conclusions: That in the great majority of cases of extra-peritoneal hæmatocele the disease may be let alone, being rarely fatal, and that it is to be interfered with only when suppuration has occurred. That, on the contrary, intra-peritoneal hæmatocele is fatal with such almost uniform certainty, that so soon as it is suspected the abdomen must be opened and the hæmorrhage arrested. In the overwhelming majority of cases the source of the hæmatocele will be found in the broad ligament, and then it can be dealt with, and with every prospect of success. If any one objects to this, I appeal again to the canon of surgery, which is of uniform application. For surgical hæmorrhage cut down and tie the bleeding point; if a big branch of the femoral artery were bleeding, my colleagues who deal in such cases would cut down and tie it. Why should Poupart's ligament be a line of demarcation within which this surgical writ will not run? Why should my friend Dr. ——— be allowed to do to the external iliac artery what I am prohibited from doing to the internal iliac division? Indeed, at page 202 of Bernutz and Goupil's work they assert this principle: "The indication in such a case is plain—we must stop the hæmorrhage."—*Gaillard's Med. Jour.*

Eclampsia in a Child aged Four Years Successfully Treated by Subcutaneous Injections of Morphia.

Dr. WM. H. MCCARGO thus writes in the *Miss. Valley Med. Mo.:* I was called in great haste about a week ago to see little George S., who was having spasms, as the messenger said. I arrived at one o'clock in the evening, and found my friend Dr. Wesson, with the patient. The little fellow had had four severe spasms since morning, having the fifth immediately upon my arrival. Upon the subsidence of the spasm I found him unconscious, spasmodic jerking of the extremities and twitchings of the face. Temperature over 105, pulse rapid and bounding, face flushed, eyes injected. Dr. W. had been with him most of the morning, and had used most of the remedies appropriate in such cases: brom. potass., chloral hydrate, antipyrin, cold sponging, chloroform by inhalation, etc. We continued the treatment for some three hours, substituting the cold pack for the sponging without any benefit; in fact, the little patient was rapidly growing worse, and seemed ready to die at each succeeding paroxysm. From 1 to 5 o'clock he must have had fifteen or twenty spasms, each one seemingly the finishing stroke. His pulse was now almost imperceptible, the face pale, lips blue, pupils dilated. In this fearful extremity, I, naturally enough, thought of your morphine treatment, as detailed in the August number of the *Monthly*. Dr.

Wesson, like myself, had been educated to believe that this class of remedies in such cases was peculiarly contraindicated, but when men get to the point we had arrived at, they are willing to give up most anything; but to be on the safe side, and as I had to send back home for my hypodermic syringe, I sent for the journal, and upon the return of the messenger we had a regular consultation, Dr. W., the *Monthly*, the father and myself. The result was the $\frac{1}{8}$ of a gr. of morph. hypodermically administered. Not another spasm. Went through the night reasonably well. Becoming restless the next day the dose was repeated. The little fellow recovered right along, and is now as bright as ever.

Complete Inversion of the Uterus.

Dr. Frank Shapley thus writes in the *Brit. Med. Jour.:* On Sunday, November 14th, about 7 a. m., I was fetched to a woman, aged 26, who had, at 6 a. m., been delivered of a live male child, with the help of a midwife. I found the patient suffering severely from shock, and almost insensible. I immediately palpated the abdomen, and found what I expected, namely, no uterus. On exposure, I found my suspicions only too true, for there was the uterus completely inverted and protruding beyond the orifice of the vagina, as a rather shiny turgid tumor, larger than the head of a fœtus at full term, and with the placenta attached to the extent of a crown piece. The hæmorrhage was very slight. Stimulants such as were available were applied, the pulse being almost imperceptible, and all other signs of complete collapse present. I sent for my partner, and then peeled off the placenta, and commenced to try to reduce the tumor, by grasping it with both hands, and squeezing it in order to diminish its bulk. When I found it giving, I proceeded to replace the fundus by pushing it gently with my fingers in the shape of a cone, until I found that they were grasped by the os; the rest then was simple, and the womb was replaced in about fifteen minutes. On my partner arriving, we injected ether into the arm (15 minims), which appeared to revive the patient almost instantly; then we injected 30 minims of chloroform, and also some gin, all into the two arms. There was no hæmorrhage, and the patient, who was in a moribund condition, gradually revived. Her progress towards recovery was very gradual, but never arrested, and at the month she was out and about (being a workingman's wife, she, of course, would not listen to my advice to rest, etc.). She feels no inconvenience or pain whatever; has no discharge, and is as well as ever she was. This is her third child; the first was delivered with forceps. The second was unassisted, and the placenta was retained two hours.

The great rarity of cases of complete inversion prompts me to send a short outline of this case, as does also the really wonderful effect of the subcutaneous injection of the ether and chloroform.

Case of Cæsarian Section Plus Oophorectomy.

The patient, aged 29, a woman of stunted growth, had a first child three years before, delivery being effected by means of instruments with great difficulty. In August of last year she was again pregnant, and at what she supposed to be about the eighth month called in a medical man. On examination, in company with Dr. Chambers, he made out that the soft parts had become adherent in con-

sequence of injury at her previous confinement, and had caused almost complete adhesion of the vagina. The antero-posterior diameter of the pelvis was diminished. The fœtal heart could be plainly heard in the usual site, but the mother's pulse was rapid, and her temperature 101.5° F. A consultation was held, and the Cæsarian section decided upon. She was therefore admitted into Dr. Chambers's private hospital on August 27. On the 28th, the patient being anæsthetized, the bladder was emptied, and an incision made from the umbilicus to within 1½ inch of the pubes. On the uterus being opened a large quantity of fœtid gas escaped. The child and placenta were easily extracted, and the uterus was then well washed out with hot carbolized water. On the posterior wall, near the fundus, was seen a circular patch of a dark gray color like a gangrene. A drainage tube was passed through the vaginal opening into the uterus, and the uterine wound closed with fine silk sutures. The uterine appendages were easily removed, and the abdominal cavity closed and dressed as in ovariotomy. Two hours after the operation the patient had perfectly recovered from the effects of the anæsthetic, and expressed herself as quite well, asking to be allowed to eat a chop. Her pulse was 146 to the minute, temperature 102.5° F. Later in the evening she still felt comfortable. The temperature had fallen to 101°; but the pulse was small, quick, and thready, a sign, in the doctor's opinion, of bad augury. 29th.—Temperature 100°; pulse was as rapid as ever. She had uterine pains at intervals, but they were not severe. No offensive smell from drainage tube. The temperature continued to fall, and the pulse became more rapid and indistinct. She gradually sank, and died on the morning of the 30th, about thirty-two hours after the operation. Death was attributed to shock and præparturient septicæmia. No *post-mortem* examination was allowed.

The Therapeutic Treatment of Uterine Fibroids and other Pelvic Tumors.

Dr. H. F. CAMPBELL, of Augusta, Georgia, in the *New Orleans Medical and Surgical Journal*, Feb., 1887, formulates the following principles, deduced from an elaborate article by him on this subject:

First, a large proportion of uterine fibromata and other pelvic tumors outside the ovarian cysts, are not properly the subjects for surgical treatment, either by hysterectomy, oöphorectomy, salpingotomy or excision.

Secondly, though these growths, especially the uterine fibroids, seldom, *per se*, destroy the life of the subject, and are limited in the duration of their injurious influence, they yet impose upon the woman a prolonged period of depression, exhaustion and ill-health, during which period she is liable to succumb to intercurrent invasions of disease before the establishment of the menopause, or the time of expected relief.

Thirdly, a systematic and persistent therapeutic course, rationally adjusted to the nature and condition of the disease, is highly desirable.

Fourthly, from the known physiological effects of ergot in combination with the salts of quinine, and of iron, with iodide of potassium, and in view of the results above presented, we may regard such a combination as rationally applicable, during the prolonged period of hemorrhage and exhaustion so frequently marking the progress of these pelvic growths.

Fifthly, while such medication cannot be expected ordinarily to remove large fibroids or materially arrest their advance, it exercises marked influence in diminishing the blood losses, and in improving the nutrition and general health of the subject of such tumors; and in some rare instances, apparently in younger subjects, it results in the entire disappearance of the growth and its deplorable concomitants.

And lastly, in view of the danger of impaction, much pain being often produced from this cause, with increase of bleeding, a womb with growing fibroids should be frequently lifted out of the cavity of the true bony pelvis, by nightly self-replacement in the knee-breast posture.

An Interesting Case of Empyema.

Dr. WILLIAM STANDLING thus writes in *The Archives of Pediatrics*: Ida P., eight years of age, German descent, on April 1st while attending school, was taken with a chill followed by fever, which assumed a continued type. It gradually declined until the fourteenth day, when there was a total cessation of fever for about twelve hours, then the temperature raised to 103°. During this whole period there was no complaint of pain; any farther than an occasional cough, there was nothing to be heard either by auscultation or percussion.

However, after fever once more began, the respiration became more hurried, and dullness was apparent over the lower part of right lung.

After making use of diuretics and diaphoretics with an occasional purge, it became evident by the 24th that medication would not remove effusion, and that an operation was the only thing left to be done.

I at once called Dr. Edw. Borck in consultation, he concluded to remove the fluid by aspiration.

Aspiration was at once resorted to, and there was about five pints of odorless pus removed, after which the cavity was washed out with artificial serum. The prospects were very favorable for two or three days, when it was once more apparent that effusion was continuing.

Waiting until May 2d, Dr. Borck operated by incision over seventh rib, introduced a perforated glass tube about one and three-quarter inches long and drained off the contents, which amounted to about three pints of pus with a fetid odor.

When tube had remained in the cavity fifteen days it was removed, when the effusion gradually subsided and wound healed very kindly. The cavity never refilled. Potass. iodide in five-grain doses was given every three hours the following two weeks, followed with egg-nogg and milk as required.

The case is well to-day, and the lung has almost regained its strength, and position in cavity. While drainage-tube remained in position the cavity was washed out twice daily with the artificial serum alone, and dressed with carbolized absorbent cotton. Temperature never higher than 103°.

A Case of Unilateral Galactorrhœa.

Before the Obstetrical Society of London, Dr. GIBBONS described this case. A lady, aged 23, who had ceased nursing for six weeks, complained of constant running of milk from the left breast. After her first confinement, she had nursed

for five months with both breasts, after which she had to give up on account of weakness; and an abscess had formed in each breast, and discharged for eleven months. After this, her second confinement, she at first nursed with both breasts; but the milk disappeared from the right one, and she continued with the left one only for four months, and then discontinued, as it was thought that her milk disagreed with the child. Menstruation had not reappeared; there was no reason to suspect pregnancy; and there was no uterine disease. Although she was anæmic, the milk was of good character, and the amount that flowed was twenty ounces in twenty-four hours. The author then enumerated the various remedies which he had used, without result, to arrest the secretion of milk; these included arsenic, iron, strychnine, iodide of potassium, belladonna, bromide of potassium, quinine in large doses, opium, compression of the nipple, galvanism, faradism, rest, and a dry diet. Menstruation appeared eleven months after the birth of the child, being preceded by a gradual diminution of the flow of milk, which continued over the second period, then ceased altogether, and the patient's condition became one of natural health. The author drew attention to the following facts: 1, that the galactorrhœa was unilateral; 2, that the milk was of normal quality and quantity; 3, that there was no stimulus of nursing or of the genital organs; 4, while resisting all treatment, it ceased spontaneously on the occurrence of menstruation. Authors were quoted as to the value of certain drugs in galactorrhœa, and cases were given illustrative of treatment by galvanism and faradism. Reference was made to the experiments of Roehrig to determine whether the nervous or vascular element had the greater influence over the secretion of milk, and resulting in favor of blood-pressure as the chief factor. Sinéty was also quoted; and, in conclusion, the author remarked that he had failed to find any case similar to the one brought forward. It was proposed and seconded that the discussion of this paper should be postponed till the next meeting of the Society.

Case of Porro's Operation for Rupture of the Uterus.

Before the Academy of Medicine in Indiana Dr. S. MATON read a paper on a case of rupture of the uterus, of which the following is an abstract. On November 5th, 1886, a patient was admitted to the labor-ward, Coombe Hospital, who had been in labor with her third child for more than three days. Her two previous labors had been difficult and tedious, the child in each case being still-born, though labor was completed by the natural efforts. A clear history could be obtained of the uterus having ruptured twenty-six hours before the patient's admission to hospital. On opening the abdomen, the child was found lying directly behind the abdomen wall, and was easily extracted; the placenta was in the lumbar region, surrounded by blood and meconium; and the uterus was situated posteriorly, small, and well contracted, with a rent in its lower part extending completely through the cervix. The uterus was then removed, the pedicle formed by the cervix being secured by a Keith's clamp and a transfixion needle, and the abdomen was closed by silk sutures. The patient rallied well after the operation, and seemed to be progressing favorably for about ten hours, when she suddenly commenced to vomit, and died. *Post-Mortem:* signs of recent and extensive peritonitis were found in the abdominal cavity. The portion of uterus

enclosed in the clamp was torn through to the lower extremity of the anterior lip of the cervix. The bladder was uninjured. The pelvis was that described as the oblique pelvis of Nægelé, complicated by projection downwards and forwards of the last lumbar vetebra.—Dr. Smyly said the great difficulty with which Dr. Mason had to contend was the poisoning either of the uterus or the peritoneum. There had been a considerable lapse of time since the accident, and the child had died; and the escape of gas from the abdomen proved that the uterus and peritoneum had been poisoned.—Dr. Mason observed that Porro's operation in itself seemed a very simple one. The indication for it seemed to be that such infection existed that it would be a good thing that the woman should be made incapable of bearing children. On the other hand, if the peritoneum was not infected Sänger's operation was preferable, on the ground that it left the woman capable of bearing children. The comparative mortality after the two operations was now almost the same. Dr. Mason, in reply, said the woman's pelvis was extremely small. If any great time had elapsed after delivery, Porro's operation was better than Sänger's; but where the rupture was very recent, the latter gave a better chance of recovery.

Treatment of Chronic Constipation in Children.

Dr. W. B. CHEADLE, at the close of a clinical lecture on this subject (*Lancet*) points out the disastrous results of mistaken treatment, and shows the necessity of a more rational procedure. "Look at the evil effect of strong purgations—how they enervate and wear out the tone of the bowel. No occasional purge of rhubarb or scammony is efficient to cure. Look, again, at the evil effect of frequent enemata. Enemata are only to be used in an emergency. They, equally with strong purges, impair tone and do direct harm by actual dilation. In confirmed cases of constipated habit, treatment must not be intermittent, but continuous; the daily administration of appropriate remedies steadily, for a considerable period, is absolutely essential. Intermittent treatment is abortive, ineffectual, and aggravates the evil. What, then, is the proper treatment for these cases? First, be sure that there is no malformation, no intussusception, no sore about the anus, rendering defecation painful. Then use saline laxatives. Their mode of action is by increasing the flow of secretion rather than by stimulating peristalsis. Thus tone returns when distension is relieved by the easy evacuation of fluid stools. Further aids to this are strychnia, nux vomica, iron and belladonna. They act by increasing muscular tone and nutrition, not by stimulating peristalsis directly. In the case of little children up to two years old, simple carbonate of magnesia in milk is sufficient (5 to 10 or 20 gr.); this is better than the piece of soap in the rectum, or the repeated castor oil or manna, so constantly advised. In older children the sulphates of magnesia and soda, with the tonics named above, and daily massage with castor oil or cod-liver oil are most useful. In older children still, a pill of aloes or euonymin, with sulphate of iron and nux vomica, may be given as an alternative to the salts and strychnia, but no frequent rhubarb, or scammony, or podophyllin, or jalap (these are for the relief of temporary difficulty only); in mild cases, perhaps, or if the liver is not acting, a dose of calomel, gray powder, and soda, or senna. Regimen is an important element in the treatment if the child should have chronic consti-

pation; abundant water, pure, not hard; 'salutaris water' is excellent. In little children add a good infants' food to milk; fruits, fruit jellies, treacle, cooked green vegetables of the softer and more delicate kinds. Some variety in food is useful; a good mixture is better than a monotonous diet. It is, I think, extremely doubtful if coarse food is useful in the long run. It causes atony and weariness of muscle eventually by over-stimulation. And you must insist on regular evacuations. Take care that the stools are not dry and hard, or the child will resist action and increase constipation. Other useful adjuncts are—abundance of fresh air, which aids in improving nutrition; and exercise, which aids the passage of the contents of the intestine down the tube, and improves general health and muscular tone."

Treatment of Constipation with Uterine Disease.

The *Gazette de Gynécologie*, of Oct. 15, 1886, gives the following as useful formulæ for the treatment of constipation associated with uterine disease:

In cases of intestinal paresis, with faulty secretion of the intestinal mucosa:

Extract of physostigma
Extract of belladonna
Extract of nux vomica . . . . . aa 30 centig.

Make 12 pills, one to be taken on rising from bed.

In cases of hæmorrhoids the constipation may be advantageously treated by administering 10 to 30 grm. of the following:

Sulphur, washed and sublimed . . . . . 50 grm.
Pulverized senna . . . . . 20 "
Essence of citron . . . . . 0.30 centig.
Simple Syrup . . . . . q. s.

M. Huchard frequently uses the following:

English magnesia. . . . . 25 grm.
Cream of tartar. . . . . 13 "
Bicarb. soda . . . . . 2 "
Oleo-saccharate of anise. . . . . 1 "

Make 40 powders. One at the beginning of each meal.

Podophyllin
Extract of hyoscyamus
Medicinal soap . . . . . aa 30 centig.

Make 10 pills. One or two at bed time.

Tincture of rhubarb . . . . . 10 grm.
Tincture of nux vomica . . . . . 6 grm.
Tincture of babian (Illicium anisatum) . . . . . 4 grm.

Ten drops in a little water 5 or 10 minutes before meals.

Cascara sagrada may be used either in the form of the powder or the tincture. Should it cause colic it may be administered by the following formula:

Powder of cascara. . . . . 0.25 centig.
Extract of belladonna. . . . . 0.01. "
Powder of lycopodium . . . . . 0.10. "

In any case treatment should be continued for several weeks, or until the desired result is obtained.

Climatic Eczema.

Eczema occurring within the range of the menopause has not, in BOHN'S opinion, *Deutsches Archiv für klinische Medicin* received the attention which its frequency, peculiar localization, obstinacy, and tendency to recur appear to demand. A period of time of from twelve to fifteen years must be allotted to the climacterium, within which the conditions arising from the systemic distubance exert their influence in inducing eczema. The statistics of Bulkley and of Bohn himself would show that only at two decennial periods does the number of women exceed those of men, among those affected with eczema. Those periods are between 10 and 20, and between 40 and 50, the periods, namely, when menstruation is being established, and when, as a rule, it ceases. As a rule, too, the monthly loss has ceased when the eczema appears. In the majority of instances in which eczema is concurrent with continued menstruation, the latter shows variations and irregularities such as often precede for a long time complete cessation. Not only is there a marked tendency to relapse in this form of eczema, but there appears to be established on certain regions of the body a predisposition to outbreaks of eczema, which proneness may continue long after change of life, even into the sixtieth or seventieth years. Another peculiarity is its long persistence. It betrays no tendency to spontaneous cure, and thus among women of the lower classes cases may be met with which have lasted many years. There is thus a relation between the protracted duration and the proneness to relapse, and the chronic cause, the slow revolution in the female system. More than three-fourths of the cases occur on the scalp and ears. The eruption may remain confined to one of these localities, or more frequently extend from the head to the ears, or conversely. The extremities also may be attacked alone—sometimes merely the hands and fingers; and when such is the case, the head and ears may be attacked later. Bohn has never seen it on the trunk. The form is like the localization, tolerably uniform. The scaly and weeping eczema predominates, in contrast to the impetiginous and pustular variety, affecting the head, ears, and face in obese infants and strumous children. Itching is well marked. Such climacteric eczemas may, from their commencement to their termination, be no more than a slight or tolerably considerable amount of desquamation, with some loss of hair, which is liable, however, to be aggravated into a moist condition by both internal and external irritants. As to treatment, we cannot now participate in Rayer's views as to its incurability. White precipitate externally and arsenic internally are nearly specifics against climacteric eczema. It cannot be denied that the relatively rapid efficacy of this treatment is strange when we take into account the chronic foundation of this eczema. Of the true nature and mode of origin of this eczema we can venture little explanation. As in all other forms of eruption which are connected with the uterine functions, it is questionable whether these prepare the soil for the skin affection, or directly take part in its evolution. While at the menopause there is uterine atrophy, there is at the same time, as in castrated animals and man, a strong tendency to the deposition of fat. There are also disturbances in the nervous system and in the circulation, which latter give rise to characteristic congestions—probably of vaso-motor origin—and hæmorrhages. More than this we do not know about the menopause.

Chloroform in Labor.

The South-Western Medical Gazette says: At the last meeting of the State Medical Society of New York, Dr. FORDYCE BARKER read a paper entitled, "Is the danger from post-partum hæmorrhage increased by the use of anesthetics during parturition?" This subject is of great practical importance, and Dr. Barker has brought the treasures of a large and successful experience to its elucidation. His paper is eminently practical, and will secure a wide reading, and will, we doubt not, lead to the more frequent employment of anesthetics in labor. Dr. Barker regards chloroform as the best and safest anesthetic in obstetrics. Since 1850 he has not used ether. He presents strong arguments for this selection. He has never been able to find any statistical evidence in proof of the statement constantly made in obstetric literature that anesthetics increase the danger of post-partum hæmorrhage. He expresses the firm conviction that no woman under the care of a watchful, prudent, and competent obstetrician ever ought to die from post-partum hæmorrhage, due solely to uterine inertia or ataxy. He also makes the important statement that uterine inertia, the fountain of post-partum hæmorrhage, is often but another name for uterine exhaustion, and this is certainly much less liable to occur when the nerve force and vital powers have been saved by the use of an anesthetic. While admitting that chloroform, in some cases, prolongs labor, and that uterine exhaustion often is the result of prolonged labor, he is satisfied this apparent objection is more than counterbalanced by the good obtained by its use. As the result of his experience, he asserts that chloroform shortens labor in a greater proportion of cases than it retards it.

"He is certain that it does in all those cases where the pains are diminished or suspended by extreme sensitiveness and fear of pain, by vivid moral impressions of hysteria, or by pains resulting from the coincidence of some malady, either existing antecedent to, or appearing during labor, such as rheumatism of the uterus or other muscular tissues, or sharp pains in the back or abdomen distinct from the pains from uterine contractions, gripings in the intestines, or the cramps are occasionally produced by the pressure of the child's head on the sacral nerves; and, finally, in all those case where inefficient uterine action results from loss of sleep and extreme exhaustion from a prolonged first stage; and in many cases where the labor is retarded by rigidity of the os uteri or perineum."

He has attended a number of patients who in previous confinements had alarming post-partum hæmorrhages, though taking no anesthetic, who have escaped this accident in labors in which chloroform was used. A peculiar idiosyncrasy, or former tendency to hæmorrhage or extreme feebleness, the reasons given for withholding an anesthetic in former labors, are the very strongest indications for the careful administration of chloroform. In private practice he has only had one case of post-partum hæmorrhage, and in this case no anesthetic was used, as the child was born before he had time to make an examination. Dr. Barker is convinced that the prevalent opinion that chloroform is dangerous for any woman with heart disease is erroneous. He has had a number of cases of labor dangerously complicated with organic heart troubles, which terminated favorably, as he thinks, solely from the use of chloroform. In an experience of thirty-seven years, using chloroform in several thousand cases, he has never in a single case had reason to regret its use. The conclusions of Dr. Barker, drawn from such a large experience, will be most acceptable to the profession.

Treatment of Diphtheria.

Dr. M. CZARTORYSKI thus writes to the editor of the *Pacific Medical and Surgical Journal:*

Having been very successful in my cases of diphtheria, I herewith lay my treatment before the profession.

There being a deficiency of oxygen in the circulation, I order limes or lemons as lemonade or in any form patient may be prevailed upon to take them, for I have found the earlier the citrous fruits are taken in this disease the quicker will a favorable result be obtained. If limes cannot be obtained, I ordered drinks and gargles of the best quality of wine or cider vinegar. A great favorite of mine is a very sour lemonade, to which a small amount of spirits may be added —and this is used as a gargle and very slowly swallowed.

If on first visit the fatal membrane has already formed, I order the following for spraying the throat:

Ol. Gaultheriæ	1½ drachms.
Ol. Thymi	1½ "
Ol. Eucalypti	2½ "
Chloroformi	1 "
Ether. Sulph.	1 "
Spts. Terebinth.	8 "
Ol. Amygdalæ ad	2 ounces.
Mix	*pro re nata.*

This should be administered, and especially during these terrible paroxysms of strangulation. While it is being used, the eyes should be protected by a wet towel.

It is remarkable how quickly these can be relieved by this spray, and the membranes disappear as if by a charm. After disappearance of the false membranes a spray of simple wine or cider vinegar is ordered, and this is used as often as circumstances may require.

Swelling of the glands of the neck is relieved by rubbing on of the following ointment:

Iodoform	1½ drachms.
Ol. Menth. Pip.	1 "

Rub together and add:

Fld. Ext. Phytolacca.	4 drachms.
Fld. Ext. Conii.	2 "
Lanolin	5 "
Ung. Camphoræ	2 ounces.

This is rubbed on the swollen parts frequently, which are then covered by a compress which must be kept well moistened with the following solution:

Ov. Gal.	No. I.
Spts. Terebinth	4 drachms.
Ol. Olivæ	1 ounce.
Acetic vini dil ad	8 "

Mix.

The congested condition of the Schneiderian membrane I endeavor to relieve by the aforementioned spray and by the use of finely powdered boracic acid as snuff. To obviate the anæmia and the depraved condition, I usually order:

Ol. Amygdalæ amar.	gtt. x.
Acid Lactici	½ drachm.
Spiritæ Chloroformi	2 "
Glycerat. acid citri	4 "
Vini Colchici	1 "
Tr. Ferri chloridi	1 "
Potass Chlor	1 "
Syr. Ipecac	2–4 "
Acid Boraci	4 "
Syr. Feniculi, q. s. ad	4 ounces.

Mix.

One-half to one teaspoonful to be swallowed very slowly every hour.

During convalescence limes and oranges may be given freely.

Obstetrical Cases.

Dr. J. H. TAGGART, thus writes in the *Pacific M. and S. Journal* for March:

Case 1st. Was called August 31, 1885, to see Mrs. M., in labor for eighteen hours. According to the custom of this people, Mexican, the case was attended by ordinary nurses till they found she was in trouble that they could not control.

I found the patient on the floor, and apparently in great distress. She was about thirty years of age, some four feet and six inches in height, and of circumference to accommodate a weight of full two hundred pounds. I had her lie on a bed with her buttocks to the edge, the limbs being supported by the nurses. The legs and thighs were very much swollen by dropsy, and they, as well as the abdomen, were covered with varicose veins. I was told that the "waters had broken" some twelve hours before, and that at least a bucketful had come away, when a hand was discovered at the vagina, and that though the pains had been strong and constant and the midwife had pulled all she could, no progress had been made. I found the hand—the right one—at the vulva, the head in the right iliac fossa, and the shoulders presenting down and forward at the upper strait. On touching the abdomen, the uterus could be distinctly made out, and seemed to be in two parts; that below corresponding to the fœtus as already made out, and another part back of the umbilicus and to the left, with a deep sulcus between. I diagnosed twins, with the liquor amnii all evacuated and the walls of the uterus clasping closely both fœtuses. I found the pelvis quite roomy and introduced my whole hand with ease into the vagina, but it stopped there. The contractions of the uterus were almost continuous, and any effort to find a foot was resisted by the whole force of the uterus, the most powerful one I ever manipulated, and the hand forced back to the vagina.

But relief must be had quickly, as the patient was fast becoming exhausted, and rupture of the uterus seemed imminent. I have observed that the lower pelvis seemed more than ordinarily roomy; the right arm of the fœtus lay partially behind it and presented at the vulva; if I could only replace that arm and put it where it belonged, I might possibly bring the head to place so as it would

engage in the strait, after which I would have no fear; and this I succeeded in doing after a few trials, and the child came into the world almost immediately. It was asphyxiated at first, but was restored after less than twenty minutes' effort.

The mother was resting nicely, but the placenta remained, and seemed firmly attached, not yielding in the least to traction on the cord.

According to my usual custom, I introduced my hand into the uterus, to remove the placenta, unless the twin I expected to find was presenting in advance of it. I soon found there was no second fœtus, and congratulated myself that I had not announced the coming of a second stranger before I knew he would keep the appointment. What I did find was an hour-glass contraction of the uterus, and at the neck a flexion of the fundus to the left at an angle of 90°, or at least the line of contraction caused the uterus to take that form. All was now clear why I could not reach the feet; they were above the neck, and when my fingers passed above the body of the fœtus they touched the roof, as it were, and were easily pushed back.

It is wonderful how the child could have borne such pressure so long and live.

There was now but one thing to do—to push the fingers past the stricture, dilating it till the hand could reach the adherent placenta, detach and remove it, and it was done, though not till I had another exhibition of the tremendous power of the uterus, which pressed my hand and arm so closely, and with such power, that they were numb and painful for two or three days afterward. The mother made a fairly good recovery, this being retarded only by a moderate phlebitis for about two weeks. The varicose veins all disappeared in another week or two. The child succumbed when about a week old from convulsions, from what cause I did not learn.

Case 2d. About the same date I was called to see Mrs. M. C., Mexican, in labor for about one day. She was about twenty-five years of age; had borne several children; no trouble before this time; was quite slender, but well developed and strong. Found the fœtus with back presenting, head in the right iliac fossa, quite similar to the position in the preceding case, but no hand had come down. The contractions of the uterus were constant and powerful. At the first touch it was evident that the child was dead, as the skin slipped from the flesh.

A determined effort was made to reach a foot, but without success. I then noticed that with each pain the back curved down below the upper strait, so placing my index finger as a blunt hook over the abdomen of the fœtus, and making strong traction, it closed upon itself with the lumbar vertebræ for a hinge, and delivery followed a moment after, the placenta also coming away at the same time. The fœtus was of average size at full term. The mother made a good recovery.

A Case of Tubercular Meningitis—Recovery.

Dr. H. E. Pelle thus writes in the *South-Western Med. Gazette.:* Roy McK—, three years and a half old, very fair; hair exceedingly fine, not over-abundant; skin thin, clear, transparent, and highly sensitive; veins shining through, giving

it a bluish tint; expression bright, quick, and sharp; face somewhat conical, unusually pale; lips thin, and disposed to be florid; eyes bright, color dark brown, pupils dilated; lower jaw small and angular; body previously was well developed, but recently has been losing flesh; bones small, abdomen rather large and full, somewhat flatulent; bowels constipated. Ossification of fontanelles took place nearly two years after birth. Dentition was early, first teeth having appeared about fifth month, and having seven teeth at seven months; temperament intellectual, being in advance of his years. Mother and father apparently in health, having had no relations to die of phthisis nearer than an uncle on father's side, which was supposed to be acquired. The first child born in this family, at the age of eight and a half months, after an illness of nine days died in convulsions of cholera infantum, so diagnosed by the attending physician. The third and youngest child is now nine months old, whose fontanelles are almost as widely dilated as they were at his birth.

Roy was brought to my office July 19, 1886, after a slight indisposition for ten days, showing an elevation in temperature; and as this was decidedly periodic, I thought it to be of malarial origin, and gave myself but little concern about it, until I discovered it could not be controlled by quinine. He had been losing flesh for some time previous; complained of being tired, and wanted to be nursed; said his arms, back, and head hurt; would not sleep, except in his mother's arms, and cried out frequently, "Oh! my head;" was easily disturbed—kept his eyes closed almost continuously, but the slightest noise aroused him. This was on July 22, after I had been called to the house to see him. Temperature was now elevated to 102, was vomiting occasionally, bowels were confined, tongue coated. Calomel and soda had produced tarry-looking stools, with considerable mucus. Quinine had failed to effect his temperature, as did also salicylate soda. Bromide potash and ergot were given to relieve headache and produce sleep. July 25th, iodide potash was prescribed, as I was now satisfied that I had a case of tubercular meningitis to deal with, and the bromide potash was increased. This state of affairs was very little changed until July 29th, when the symptoms began to increase in severity. Understanding the gravity of the case, and with considerable misgivings as to its termination, I requested counsel. My friend and teacher, Dr. J. A. Larrabee, was called, and after a thorough examination confirmed my diagnosis, and gave the family a very unfavorable prognosis. We decided upon the following prescription: Bromidia (Battle & Co.), 2 drachms; bromide of potash, 2 drachms; syrup aurantii, 2 ounces; and aquæ, 1 ounce. SIG.—Teaspoonful every hour until quiet.

July 30th, the screams of the child, at times, were so distressing and alarming that I was sent for in great haste, and the dose of the above mixture was doubled, and was given until the following day, July 31st, before quiet was restored.

For about four days the child remained in a stupor, never changing his position, unless he was turned by his nurse. He would drink milk without opening his eyes or seeming to notice anything about him. His temperature was now 103, and, with a view of controlling this and the inflamed meninges, I applied cold by means of the head coil. The coil was kept continuously applied during his illness, after the first ten days.

On the night of August 5th, the bromidia mixture, which was now given about

every four hours, was, through some mistake, not refilled, and the next morning that peculiar cry returned. Sending for me in haste, and Dr. H. G. Allan being at my office at the time, I requested him to go with me, as it was a case of great interest to me, and I knew it would be to him. We ordered the bromidia mixture continued, and a small cantharidal plaster behind each ear. The blisters were ordered again about a week later.

I desire to say here, that at this time that peculiar vaso-motor irritability called *tache cerebrale* existed to a marked degree. His condition remained about the same until August 11th, when finding him with a very rapid and weak pulse, I gave digitalis, carb. ammonia, vini pepsin, and brandy every 3 hours: discontinued bromidia, and substituted bromide potash and ergot every four hours.

August 20th, I was compelled to resort to nutritive enemas, on account of child strangling when attempting to swallow. The enemas were continued nearly a week, when signs of improvement began to take place. The iodide and bromide were now discontinued. The carb. ammonia mixture was still given, and syr. roborans added, and cod-liver oil applied to the surface of the body. This treatment was continued until the child had thoroughly recovered.

After signs of improvement took place, and the child began to try to talk, it was about a week before it could articulate a word, and would manifest signs of impatience at not being able to make itself understood, which it finally would do, by mumbling and its trembling little hands.

Feeding Infants—An Important Error.

The *Jour. Am. Med. Ass.* says at the recent meeting of the British Medical Association in Brighton, Dr. R. P. B. TAAFFE, President of the Section on Public Medicine, in his opening address to his section discussed several topics of much interest. After mentioning the efforts that had been made to destroy or abate the coal-smoke and to purify gas, he showed from the vital statistics furnished by the Register-General that the annual death-rate in England and Wales during the decennial period ending 1880 was 21.27, instead of 22.4, which it had been for the three preceding decades. He showed further that for the last half decade ending with 1885 this mean death-rate had fallen to 19.3 per 1000. The details indicated that the greater part of the improvement had resulted from the diminished mortality in childhood caused by improvements in the sanitary conditions affecting the poorer classes.

Following the discussion of general vital statistics, Dr. Taaffe presented some important facts concerning the mortality from infantile diarrhœa. Of 582 deaths from diarrhœa at all ages recorded by himself in seven years, 526 occurred among children under five years of age, and of the latter 433 were children under one year. Of 441 children who died under five years, concerning whose feeding special inquiries were made, 49 only were nursed wholly by their mothers, while 392 had been "fed more or less artificially." Of these, 260 were fed on milk from the bottle; 40 were nursed by the mothers and fed also upon artificial foods; 64 were fed partly on milk and partly on artificial foods; and the remaining 21 were fed on artificial foods, such as oatmeal, arrowroot, corn flour, baked flour, Ridge's and Mifflin's foods, tea-cakes, tops and bottoms, bread-sop, and beef-tea. Dr. Taaffe, after condemning the practice of either feeding or nursing infants too

frequently, gives the following directions: "No infant at the breast, or who is being brought up by hand, should be fed more than once in *three* hours during the day and twice in the night; after five months old every *four* hours in the day and twice in the night. If brought up by hand, the food should consist only of milk and water, to be sucked from a bottle. For the first day or two (after birth) the proportions should be—milk one-fourth, water three-fourths. After the first day or two, and up to two months old, milk one-third, water two-thirds; from two to four months old, milk and water in equal parts; from four to seven months old, milk two-thirds, and water one-third. A dessertspoonful of sugar of milk may be added to each bottle."

We have copied these directions from the otherwise excellent address of Dr. Taaffe, not because they are new, for they are substantially the same as have been given by many writers, and which mothers and nurses have endeavored to execute in their care of infants for half a century at least, but because careful clinical observation over a wide field of practice long since taught us that they contained an error of very great practical importance—namely, the excessive *dilution* of the food of infants. Our attention was attracted to this subject at an early period, and more than thirty years since, in addition to careful clinical observation, we prosecuted investigations, chemical and microscopical, concerning the mother's milk in healthy uncomplicated lactation and also when complicated with menstruation and pregnancy.* In the same connection we prosecuted inquiries concerning the effects of various degrees of condensation and of dilution of pure milk of the cow as food for infants. The analyses of the milk of three healthy mothers with healthy nursing children, one in the third month of lactation, one in the fourth, and one in the seventh, gave a mean composition in 1,000 parts: Water, 878.07; casein, 49.78; butter or oil, 35.58; sugar and extractives, 32.15; and salts or inorganic matter 4.31. In other words, the proportion of assimilative or nutritive matter to the water, was little more than 1 to 7. According to the analyses of Payen,† good cow's milk contains in 1,000 parts: water, 864.0; caseine and lacto-protein, 43.0; butter or oils, 37.0; sugar or lactine, 52.0; and salts or inorganic matter 4.0; being in the proportion of 1 part of assimilative material to 6.3 parts of water. It is thus seen that the excess of assimilative or nutritive material in the cow's milk is less than four-tenths of one part, which is less than the differences often found between different specimens of healthy human milk.

Suppose, in applying the rule given by Dr. Taaffe, we commence the day feeding of a child under two months old at 6 a. m. and end it 9 p. m., and add two feedings for the night, it would allow eight feedings every twenty-four hours. If we allow four ounces for each feeding, which is a large allowance for an infant of less than two months, it would get thirty-two ounces per day of twenty-four hours; four ounces of which would be nutritive matter and twenty-eight ounces water if it were good mother's milk, and a fraction more if it were good cow's milk. If we may suppose the infant able to appropriate the whole four ounces in the twenty four-hours and lose in the same time by eliminations or waste two

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* See Transactions of the American Medical Association, vol. ix, p. 417, 1856.

† See Flint's Physiology of Man, Volume on Alimentation, etc., p. 78.

ounces, it would grow, or gain in weight, two ounces per day, or at the rate of nearly four pounds per month. But if we comply with the rule and make the milk two parts water to one of milk and still allow the infant four ounces each feeding, or thirty two ounces per day, instead of four ounces of nutritive material and twenty-eight of water, it would have received only 1⅓ ounce of nutritive matter to 30⅔ ounces of water; and if, as in the former supposition, the infant lost by elimination or waste two ounces per day, instead of gaining an aggregate of near four pounds per month, it would actually have lost one pound and a quarter during that time. And such has been the actual tendency of every attempt we have seen made to literally adhere to the rules given in the address mentioned, although many such have come under our observation during the preceding thirty years. The suggestion of Dr. Taaffe that a dessertspoonful of sugar of milk might be added to each bottle of the diluted milk would only tend to restore the natural proportion of this ingredient, while the proportion of caseine, butter and salts would be largely deficient, and the water in proportionate excess. An infant thus fed with milk containing only one-half or one-third of the proportion of solid or nutritive constituents belonging in the natural mother's milk, soon begins to be restless and in less than an hour after feeding is fretting and crying for more. If the mother or nurse yields to its demands its stomach is kept almost constantly filled with the attenuated fluid, which either soon encourages the rejection of much of it by vomiting or diarrhœa, or if absorbed renders the watery element of the blood greatly in excess, and two or three months suffices to bring the child to a state of complete emaciation, the mother and nurse worn out with the fruitless effort to pacify the child's almost incessant worrying; or with less patience they have obtained rest for an hour or two at a time by adding either the anæsthetic effect of a few drops of brandy or whisky to the child's milk, or ample doses of opiates in the form of cordials and soothing syrups.

We have seen scores of these little sufferers soon restored to the condition of quiet, cheerful, thriving babies by simply insisting on their being fed with milk containing the full natural proportion of solid elements, and sometimes slightly increasing these by either boiling enough to evaporate some of the water, or by adding a very little wheat flour and a few grains of salt while the milk was boiling. The child thus getting enough nutritious material to supply the demands of its tissues in a less bulk of water yet easy of absorption and assimilation, avoiding over-distension of the stomach, takes long quiet sleeps, and grows fat and happy.

VII. SURGERY.

Excision of the Veins of the Leg.

A correspondent of the *American Practitioner and News* writes from England that a not uncommon operation there, and one which has proved very successful, is excision of varicose veins of the leg. It is considered especially applicable to the saphenous vein in the thigh and popliteal space. The incision necessary to remove a varix need not, of course, be as long as the vein itself, as the vein can be readily drawn out, when it is ligated above and below with catgut, the intermediate piece clipped out, and the wound dressed antiseptically. Of course no Esmarch bandage is used.

The Uniting of Several Digits.

Dr. WILLIAM P. SOUTHER, of Worcester, Mass., writes to the *Boston Medical and Surgical Journal* as follows: "The following case is unique in my practice, and may interest your readers. A young man in a neighboring factory had a finger cut off by a large paper-cutter. He brought the exsanguinated piece to me wrapped up in his handkerchief. It was three-fourths of an inch long, and included the nail and perhaps half an inch of the last phalanx. With little expectation of success, I adjusted the amputated piece to the stump, and now, after ten days, it is firmly adherent, the renewed circulation showing plainly at the finger tip. Perhaps you can inform me whether such an experience is common."

Prosecution for Venereal Infection.

Some consternation may be produced among a certain class by a recent judgment of Justice Wills, of the Central Criminal Court, England. The charge against the prisoner was in two counts—one that he had carnal knowledge of an imbecile woman aged eighteen years, and the other (under 24 and 25 Vict., c. 100, s. 47), for a "fraudulent assault" upon the same woman, occasioning her actual bodily harm. The harm done was the wilful infection with syphilis. The prisoner was found guilty on both counts, and sentenced to two years' imprisonment for the first, and five years for the second. The more remarkable piece of information is that a man who has immoral sexual connection with a woman, knowing himself to be suffering at the time from gonorrhœa or syphilis, is liable to prosecution and penal servitude.

Fracture of Spine.

Before the Midland Medical Society, Dr. SUCKLING showed a youth, aged 18, who at the end of last September had fallen twice upon his back. When seen four days after the second fall, he was unable to stand, but could move his legs when in the recumbent position; he was unable to turn over in bed, had girdle-

pains in the upper lumbar region, and shooting pains over the iliac bones. There was no anæsthesia, no paralysis, and no bladder trouble; but the first and second lumbar spines were prominent, and great pain was elicited on light percussion over them; the right cremasteric reflex was lost. The temperature varied from 99° to 102° for a week after admission. Under treatment by a plaster-jacket, these symptoms had now almost entirely disappeared. Dr. Suckling considered that there had been a fracture through the arches of one or more of the lumbar vertebræ, with irritation of the last dorsal and first lumbar nerves.

Dislocation of the Humerus Reduced by Right-angle Traction.

Dr. C. R. Owen thus writes in the *Brit. Med. Jour:* H. B., aged 32, a strong muscular man, 5 feet 11 inches in height, whilst skating on January 17th, 1887, fell with his right arm extended, and dislocated his shoulder. He was seen by me about half an hour after the accident, when I found the head of the humerus below the glenoid cavity. I had him placed sitting in a chair, and steadied by an assistant; then raising the arm to a right angle, and grasping it firmly above the wrist with my right hand, pressing it close against my side, I steadied the scapula with the palm of my left hand on the acromion process, at the same time pressing the head of the humerus with my fingers. I maintained steady traction for eight or nine seconds, when the bone easily slipped into its proper place.

If this case had been treated by the usual method, it would have taken a much longer time, and greater exertion in overcoming the resistance of the deltoid and other muscles in so strong a man. This is the first time I have tried the right-angle traction, and I am certainly pleased with the result.

Injury to Thorax.

Before an English Medical Society, Mr. Francis showed, for Mr. Sunderland, of Thaxted, a patient who had recovered from a severe crushing injury to the thorax. Three years previously he was crushed between a traction engine and its tender; when seen a few hours afterwards, he was in a condition of great collapse, with considerable hæmoptysis. The sternal end of the left clavicle was dislocated behind the manubrium sterni, and the cartilages of the first six or seven ribs of the left side were separated from their attachment to, or fractured just outside, the sternum, and driven behind that bone. The shoulders were drawn back, and confined by a figure-of-eight bandage, but the hæmoptysis continued for a few days, and there was emphysema of the whole of the front, back, and side of the chest on the left side, with irregularity in the heart's action. He was able to resume work fifteen weeks after the accident. The original deformity remained, and the sternal end of the clavicle could be plainly felt behind the manubrium, but there was no evidence of pressure on the trachea, œsophagus, or large vessels.

Report of an Epidemic of Gonorrhœa Contracted from Rectal Coition.

Dr. R. Winslow, *Medical News*, August 14, 1886 says: In a certain institution near Baltimore, a large number of boys, of ages from nine to twenty-one years, are collected, who are, with few exceptions, closely watched, and are seldom

allowed out of the sight of an officer. Notwithstanding these conditions, during 1883 and 1884 numerous cases of urethritis developed amongst the boys, the origin of which for a long time remained a mystery. As the number of cases increased, the officers began to unravel the mystery. It was found that sodomy had been practiced for a long time. The gonorrhœal epidemic is supposed to have originated by a boy, when on leave of absence, contracting gonorrhœa from a girl. The rectum of a boy, from whom another contracted the disease, was found to be red, painful, bleeding easily, and inflamed. The author inquired of one of the boys, who acknowledged to both active and passive pæderasty, whether he submitted to the approaches of his friends from any gratification which the act gave him. He denied having any pleasure in acting the part of the female, and only allowed it for reciprocal purposes. The epidemic ceased about January 1885, owing to the strict watch kept upon the suspected boys, and the severe corporeal punishment inflicted upon those detected in the act of sodomy, although isolated instances are still occasionally discovered.

A Suggestion for Reducing Dislocations of the Fingers.

Dr. J. W. MacFarlane thus writes in the *Med. Times:* While demonstrating to a class on minor surgery the appliances used to reduce dislocations of the fingers, some difficulty was experienced in keeping Levis' instrument in position, even with a wet bandage applied to the part.

Having of late been obliged to wear some of the gum finger-stalls of the shops, to avoid poisoning in a cut, and recognizing how they adhered when once in position, the idea suggested itself that one of these would be an excellent covering for the finger, over which Levis' instrument or a clove-hitch could be secured if desired.

A close-fitting gum finger-stall was then applied, and, upon grasping with the right hand the finger so covered, we found that we had such a power and perfect control that further appliances were unnecessary—slipping being out of the question with a finger so covered, especially if the operator's hand is warm.

This simple suggestion may perhaps not have the merit of originality, although I have never come across it before; but it seemes to me that much more accurate and judicious traction can be made when the dislocated finger is in the firm grasp of the fingers of the right hand, while the thumb of the right and the whole of the left hand are free to manipulate with, than in the customary method of procedure. Or, if desired, the gum finger-stall can be used as a fixation point for Levis' instrument or the application of a clove-hitch.

Intermittent Treatment of Syphilis.

In the *Centralblatt für Klin. Med.*, No. 41, 1886, Dr. Lewentaner, of Constantinople, refers to the fact that in the Wiesbaden Medical Congress the principal syphilologists, except Neisser, were enthusiastic in upholding the old method of treating syphilis; in other words, they approved of beginning the treatment only when eruptions are observed. He thinks that the social side of the question has been entirely lost sight of in the discussion. The danger is always present. The patient may prove an infecting agent to all with whom he comes in contact, and, again, few patients ever consult a physician upon the breaking out of secondary

or tertiary symptoms, and, indeed, usually not until serious disturbances have begun to develop. It is this very delay which produces the tremendous number of cases of nose affections, perforation and destruction of the palate, syphilis of the brain, disease of the liver, etc. Chronic cases of rupia and ecthyma in adults which he has had occasion to treat, and which no medication in the world would overcome, are the results of this faulty method of treatment. On the other hand, the advantages of having a patient continually under observation, as well as being able to enlist his obedience in all matters of diet, hygiene, etc., because of the promise which may be held out to him of a permanent cure, are very apparent. The author gives two cases to prove the efficacy of Fournier's method, and adds the opinion that the data furnished by Fournier's own experience constitute a most effective argument in favor of the principles maintained by Neisser.

Plugging the Posterior Nares.

Dr. FRANCIS L. HAYNES, of Philadelphia, describes (*Therapeutic Gazette*) an easy method of plugging the posterior nares. A piece of fine silver wire, fifteen inches long, is doubled; the closed end is left rounded, and the free ends are neatly twisted together. A slight bend is given to the bar thus formed. A stout thread twenty-five inches long is tied to the twisted end.

The patient sits in front of the physician, his head thrown slightly backward, so as to make the passage of the wire into the pharynx more easy. The parts are illuminated by the forehead head mirror, unless a good supply of daylight can be used.

The blunt end of the wire (with the concave aspect downward) is pushed along the floor of the nasal passage, and through the naso-pharnyx until it is seen in the pharnyx, the patient assisting by holding the tongue with a depressor. The end of the wire in the pharnyx is now grasped by Gross's polypus forceps, the fingers, or anything else convenient, and pulled through the mouth. The thread is cut, and a piece of absorbent cotton, slightly compressed, large enough to fill the posterior nares, is tied to it, about ten inches from its mouth end. The tampon is pulled into position by drawing on the nasal end of the thread. The plug is generally caught by the edge of the soft palate, but can easily be guided past it by the finger. The nasal and mouth ends of the thread are tied together, so as to form a loop, which is hung over the nearest ear, so that it may be out of the road.

Treatment of Wounds of the Bladder.

Dr. JOHN HOMANS, Surgeon to the Massachusetts General Hospital, Boston, Mass., writes:

"As bearing on the subject of the suprapubic operation for stone, which is being revived at this time, I may say that I have twice cut open the bladder during an ovariotomy. The first time was in my seventy-second case (one of dermoid tumor). The incision in the bladder was carefully sewed up with a continuous suture of silk, care being taken not to include the mucous membrane in the stitch. The bladder was closed tight, and a Sims catheter was kept in the urethra. The catheter was removed on the tenth day. The temperature was never above 99°, and there have never been any vesical symptoms at that time nor since. The second time was in my two hundred and tenth case—one of double

papillomatous ovaries, the patient having been tapped eighteen times in five years for the removal of ascitic fluid. The wound of the bladder was more extensive than in the first case, and required twelve interrupted sutures of silk, in which the peritoneal and muscular coats alone were included. A catheter was kept in the bladder seven days. After that time the urine passed naturally. In neither of these cases was the bladder drained through the abdominal wound. If the catheter in the urethra will drain the bladder, it would seem unnecessary to have another exit in the roof of the bladder. It would be well, however, to leave a drainage-tube in the integuments over the sewn-up bladder in case there should be any leakage."

Diagnosis and Treatment of Gonorrhœal Cystitis.

The following are the conclusions of an article on this subject by Dr. ERNEST DESNOS (*Bulletin Général de Thérapeutique*, November 15, 1886): 1. Gonorrhœal cystitis has its seat in the cervical portion of the bladder; it always exists together with a deep urethritis, but the latter alone cannot give rise to all the symptoms of cystitis. 2. In the commencing stage of gonorrhœa there may be a frequent desire to urinate, but the short duration of this symptom and the absence of other characteristic signs suffice to exclude a diagnosis of inflammation of the bladder. 3. In chronic cases the differential diagnosis between gonorrhœal and tubercular cystitis is sometimes impossible, especially when the latter supervenes upon an old gonorrhœal inflammation. 4. A certain number of cases, called cystalgia or neuralgia of the neck of the bladder, are nothing else than incompletely cured cases of gonorrhœal cystitis; but at times, even after a complete cure, a certain painful sensation persists for a very long period. 5. The treatment of acute cystitis by means of emollients is rarely successful and merely prolongs the disease; even in the acute stage, applications of nitrate of silver should be made to the neck of the bladder; a smart reaction is manifested the first time, but improvement rapidly follows. 6. In chronic cases, washing out the bladder is of little use, and may even cause an acute exacerbation; in such cases general treatment is a good adjuvant to the indispensable local treatment. 7. This local treatment should consist in direct instillations of certain remedies to the neck of the bladder. 8. Sublimate solution, in the strength of 1 to 250 or 1 to 500, causes severe and prolonged pain, and its effects are slower than those of nitrate of silver. 9. Iodoform dissolved in oil or suspended in glycerine is not painful, but its effects, although in the main satisfactory, are slow and uncertain. 10. Hydrochlorate of cocaine quiets the pain only for a very short period; but when applied to the neck of the bladder some minutes before the instillation of a caustic, it causes a very sensible diminution of the pain of the latter. 11. From all points of view, however, nitrate of silver possesses an incontestable superiority over all other therapeutic agents.

A Case of General Debility with Marked Nervous Reflexes, Due to an Elongated and Adherent Prepuce; Circumcision and Recovery.

Dr. W. C. FISHER, thus writes in the *Texas Courier Record of Medicine:* I was called to see G. W., age 2 years, nativity city, June 24, 1886. He was pale,

anæmic, irritable, indisposed to move about, and would loll around on the floor; his bowels were relaxed, and his abdomen was distended a great deal. I was informed that another physician had seen him three or four weeks prior to my visit, and had discharged the case as convalescent from remittent fever. I prescribed some bismuth powders for the relaxed condition of the bowels, and a reconstructive tonic in the shape of cod-liver oil, syr. iodide of iron, and quinine. I would from time to time find an increase of temperature, and then a sub-normal one. The bowels would be controlled for a day or two by the bismuth, and then break loose with renewed vigor. There was a flabby condition of the external muscles of the leg, and a partial paralysis of these. For this I ordered massage twice a day. I was at a loss for the cause of the trouble, and a diagnosis. My little patient not progressing as I thought he ought, in about two weeks from my first visit I asked the mother to remove the diaper, and there found a very long prepuce, with a pin-hole opening. I then felt that I had a clue to the trouble, and had solved the mystery. I informed the father that an operation would be the only thing, and to this he readily consented. In about three days from this I had the little fellow chloroformed and removed the prepuce, the mucous membrane of which was closely adherent to the glans penis, and under it was quite a quantity of smegma. The wound healed readily in a week, and with the assistance of a mild tonic he rapidly recovered. He commenced to improve a day after the operation, and in a month's time he was running about and playing with the other children, and bore little resemblance to the fretful and emaciated child whom I had circumcised. In short, he was a picture of health.

My only object in reporting this case is to add my little mite to the proof that an elongated and adherent prepuce produces many reflex troubles, and that its early removal robs the grave of many victims, the asylum of many inmates, and the orthopœdic institutions of many patients.

Fracture of Cranium; Hernia Cerebri; Recovery.

Dr. WILLIAM HENRY, thus writes in *The Jour. Am. Med. Ass.*: In June, 1886, my little daughter, aged 8 years, while trying to drive a horse running at large, was kicked on the side of the head, the skull being fractured over the posterior superior portion of the right parietal bone, crushing the bone and driving it in, producing compression of the brain.

I was absent from home at the time, and my friend Dr. Burns was called in; his opinion was that she would not live twelve hours. I was immediately telegraphed for, and on arriving at home in a few hours I found the child in a comatose condition, her pulse regular and about 110. I sent for Dr. Burns, and we soon went to work to remove the compressed bone, but after the removal of seven pieces of bone the comatose condition was not entirely relieved. She remained in a semi-comatose condition for five days.

We found the membranes ruptured in the anterior portion of the fracture, and portions of cerebrum oozing therefrom; in all about half an ounce was lost. The edges of the wound were united with stitches, the antiseptic used being a dilute solution of carbolic acid. In a short time the wound began to suppurate, and then became very much swollen. In the meantime I had returned to my place of business, leaving the patient in charge of Dr. Burns, who sent for me

again when this last complication arose. I thought it would be best to open the wound in the lowest portion and let out the pus. On his doing so a considerable amount of pus escaped.

I again returned to my place of business, and in a short time Dr. Burns thought that the swollen condition was increasing, and cut the stitches. This caused the wound to gape open, and there soon appeared a hernia cerebri, about as large as a hen's egg. Seeing this condition Dr. Burns called in Dr. Helm, of Rockford, and Drs. Donaldson and Herb; but they hesitated to advise active interference during my absence. On my return, in a few days, I found the hernia cerebri still increasing, and after a consultation with Drs. Burns and Donaldson, I determined to ligate the tumor at its base. I accordingly tied it with silk ligature, drawing the ligature until the pulsation was almost diminished; and in a few days I again tied it, drawing the ligature until all pulsation ceased. It then began to heal under the ligature as the strangulated portion began to die and dry up; and in about fifteen days the tumor fell off, leaving the wound closed and nicely healed.

Wagner on the Indications for Nephrectomy.

The *Deutsche Zeitschrift für Chirurgie*, Band xxiv., Heft 5–6, contains an able paper of much practical interest on renal surgery, by Dr. P. WAGNER, of Leipzig. This paper, which is based on a clinical study of an extensive series of cases under the care of Professor Thiersch, deals with the pathology, diagnosis, and treatment of the renal affections amenable to surgical treatment, and, after a consideration of the measures proposed for determining the presence and functional condition of a second kidney, concludes with some remarks on the indications for nephrectomy.

The indications for extirpation of the kidney have recently, it is asserted, been somewhat restricted. There is now much objection to the removal of a wandering kidney of healthy structure, as nephrectomy differs from ovariotomy in this important respect, that the kidney belongs to the class of organs on which depend the proper working and vitality of the organism. In performing nephrectomy, the surgeon runs the risks of removing a single organ, or of leaving the fellow kidney either already diseased, or liable to become so sooner or later after the operation. This last result is not likely to occur, according to some surgeons, after removal of a calculus or suppurating kidney. Cases have been recorded of death from anuria after nephrectomy, in which the remaining organ on both macroscopic and microscopic examination appeared to be normal. It is open to doubt whether, under certain conditions, as in aged and very feeble subjects, the remaining kidney is capable of becoming enlarged to such an extent as to perform the functions of two renal organs. It has been pointed out by Rosenheim that even in the most favorable cases the subject of nephrectomy is never able to perform with the remaining organ the full functions formerly performed by two kidneys.

Nephrectomy is urgently indicated in cases in which the renal lesion directly threatens life, as, for instance, in cases of severe injury to the organ and malignant disease. That the results of the operation have been so bad in the latter class of cases is owing to the difficulty of establishing a sure diagnosis before the dis-

ease has attained an advanced stage. In cases of non-malignant renal tumor the organ should be removed when of such increased size as to give rise to serious symptoms. The operation is indicated in tubercular disease affecting but one kidney. This, however, Dr. Wagner points out, is a condition that is rare and very difficult to recognize. In cases of renal calculus and pyonephrosis the surgeon should content himself at first with nephro-lithotomy or nephrotomy. In suppurative affections nephrectomy is indicated if the disease be progressive, has caused emaciation of the patient and hectic fever, and is likely to be associated with general amyloid degeneration. Hydronephrosis and renal cysts, apart from special complication, afford no indications for nephrectomy. Dr. Wagner holds that the extra-peritoneal operation should always be performed if possible. In cases of renal calculus, of pyonephrosis, of tubercular disease of the kidney, and of uretal fistula, he would advocate Simon's lumbar incision. In the removal of a diseased wandering kidney, or of a large renal tumor, it would be found necessary to perform the trans-peritoneal operation. In discussing the value of the the different methods that have been proposed for determining the presence or the functional capacity of a fellow kidney, Dr. Wagner states that some of these are too theoretical, some applicable only to the cadaver, others too heroic and dangerous, and most of them far too uncertain to be of any real utility.

Dislocation of the Wrist.

Dr. ALEX. PATTERSON thus writes in the *Glasgow Med. Jour.*: On the morning of the 2d of August last, a gentleman, formerly a pupil at the Western Infirmary, came into Ward 14, saying that he had brought a case about the existence of which I was extremely skeptical. I had been always doubtful as to the occurrence of a simple dislocation of the wrist-joint, because no case had ever come under my observation, although over and over again I had been asked to see cases of supposed dislocation, of which every example, so far as could be made out, was simply a Colles' fracture.

The patient, J. F., aged 24, a carter, was ushered in. He carried the left arm bent to a right-angle, the right hand supporting the left. He was pale and anxious looking, evidently suffering from a certain amount of shock, as the injury had been sustained only a short time previously. Patient stated that a horse attached to a lorry ran off, and that he and another man accustomed to handling horses ran towards him and caught each a rein. His comrade had to let go, whilst he, holding on with all his might, brought the horse suddenly round, when F. fell bringing the horse down with him, the horse's shoulders resting upon his left arm, with the hand strongly flexed beneath.

On glancing at the hand, it was at once noticeable that it was not an ordinary wrist fracture. It presented an outline which was altogether new to me. *The carpal end of the radius could be plainly seen and felt, with the styloid process almost driven through the skin, which was tensely drawn over it, white and glistening.* Under chloroform, the dislocation was reduced without any special difficulty, nothing in the way of crepitation being detected at any time. From the amount and nature of the violence leading to the displacement, I imagined there would be a considerable amount of laceration of the binding ligaments of the joints, and took the precaution of putting the forearm up in splints.

Hamilton, of New York, gives, at page 782 of his work on *Fractures and Dislocations*, a most graphic description of the only case he had witnessed of a similar accident. Maclise, in his work (*Dislocations and Fractures*), gives views of the dislocation dissected.

Retention of Urine Caused by a Piece of Thorny Cane.

Dr. Geo A. Harris thus writes in the *Brit. Med. Jour.:* During the autumn of 1881, when acting as Civil Surgeon of Backergunge, a district of East Bengal, the following case, which presents some interesting features, came under my notice. I am not aware of a similar case having been noticed before. On October 7th, whilst I was at the Civil Dispensary at Barisal, a man came up in rather a shamefaced way, and complained of retention of urine since the previous night; something, he said, had got fixed in the urethral channel. On examination, a foreign body was seen projecting slightly beyond the urethra. The lips of the meatus were swollen and lacerated, and the foreign body was tightly grasped. The foreign substance was a piece of the stem of the thorny cane (*Calamus rotang*).

Before bringing him to hospital, he and his friends had tried the effect of direct traction for some hours, only with the result of cruelly lacerating the urethral mucous lining and more firmly wedging in the piece of twig. It was obvious that any further effort in this direction, even the gentlest, would have greatly increased his sufferings, and, from the nature of the foreign body this will be readily understood. I, therefore, gently pushed it back, until I judged all the thorns had become disentangled, and with some little trouble succeeded in passing a cannula over it, as recommended by Mr. Christopher Heath, and withdrew the piece of stick easily through the cannula.

Beyond some slight scalding and pain in micturition for some few days, no ill effects followed. It transpired on inquiry that three brothers, not quite approving of the attentions paid by my patient to one of their female relatives, took counsel together, and waylaying him in the jungle at night, overpowered him and deliberately introduced two and a half inches of thorny cane into his urethra, well knowing from the disposition of the thorns on the stem that it would be extremely difficult, if not impossible, for the victim himself to remove it, and that in any case, extreme suffering would result; a powerful moral hint being at the same time inculcated in a way that would ensure its being remembered through life.

Dr. Chevers, in his work on Indian Medical Jurisprudence, p. 556, merely mentions that "pieces of straw and wire" have been occasionally introduced into the male urethra as methods of torture. From the reference given, this was apparently done only in the Madras Presidency.

A Case in which the Urinary Bladder was twice Ruptured, the first time by an Injury, the second time—Seven Years after the first—by the Giving Way of the Cicatrix.

Dr. Henry Morris reported this case to an English Medical Society. A man, aged 36, had been drinking at a public-house on the evening of June 4, 1879, when a struggle ensued, and his opponent threw him and knelt with violence upon his abdomen. All the symptoms of peritonitis and rupture of the bladder were

excited, and the patient was admitted into the Middlesex Hospital on June 6th, 1879. The treatment consisted of hot fomentations to the abdomen, half a grain of opium in a pill every six hours, and the retention, just within the neck of the bladder, of a gum-elastic catheter. He recovered perfectly, and left the hospital on July 10th, 1879. He applied at the hospital again on August 4, 1886, and gave the following account: On August 2d, he had been at a "bean feast." On the following morning his bowels acted and he passed some urine, but the latter act was attended with some pain. From this time pain increased, and in the evening he was unable to micturate. He had vomited frequently, and had had hiccough since the onset of pain, until the afternoon of August 4th, 1886, when a catheter was passed, and nearly three ounces of bloody urine were withdrawn. He was then admitted as a case of peritonitis and suppression of urine. On August 5th, about one pint of thick, purulent, and slightly blood-stained urine was drawn off. At 7 a. m., on August 6th, he passed a little flatus and a large quantity of urine, and suddenly became very sick. Soon afterwards he was quite collapsed; his abdomen became very distended; he never rallied, and died at 11:5 a. m., on the same day. At the *post-mortem* recent general acute peritonitis was found, and in the pelvis there were fifteen ounces of purulent urine and a quantity of lymph. A band an inch and a quarter long united the fundus of the bladder with the rectum. The vesical end of this band was hollowed out into a slender funnel, and through a rupture in it close to the bladder a string of mucus was projecting. Slight pressure caused purulent urine to ooze from the bladder through the rent into the peritoneal cavity, the rectum, bladder, and penis were removed *en masse*, and were submitted to a committee consisting of Mr. Savory, Mr. Bryant, and Drs. Goodhart and Kingston Fowler, who reported in their opinion "the specimen exibits all the features which might be expected at a remote period after a rupture of the bladder." This case, in the first instance, had been reported in 1879 as one of recovery from rupture of the bladder. It was now brought before the Society because in its completed form it afforded conclusive proof that an intra-peritoneal rupture of the bladder was not necessarily fatal, but may be recovered from under the simple treatment employed in this case, provided the urine at the time of the rupture is of normal composition. The case was believed to be unique, in that it furnished the *post-mortem* appearances of the bladder some years after recovery from an intra-peritoneal rupture of its coats.

To Ascertain whether Gangrene is Likely to Follow Severe Injury of a Limb.

Dr. W. Scott Lang thus writes in the *Edinburgh Med. Jour.*: In cases of severe injury to limbs, it is frequently difficult to determine whether the blood-vessels have been so much injured as to necessarily involve gangrene of the part beyond the seat of injury. Pulsation in the main vessels beyond the seat of injury is often indistinct and difficult to make out, to say nothing of the chance of abnormal distribution of arteries.

The following method of procedure is recommended as being useful to enable a surgeon to obtain an accurate idea of the probability of the circulation being restored:—

Gently raise the limb, and keep it raised for two or three minutes, in order to empty it to some extent of blood, then apply a tourniquet or piece of elastic. webbing on the proximal side of the injury, and keep it applied for about a minute—lower the limb, remove the tourniquet, and if sufficient circulation remains, the part beyond the seat of injury will blush rosy red, and will show in an unmistakable manner the condition of the blood-vessels.

Bleeding points, can, of course, be temporarily secured by forcible pressure This procedure was adopted by the writer in a case of severe compound comminuted fracture of both bones of the leg. The patient was a boy, aged ten, who had been run over by a tramway car in one of the suburbs of Edinburgh, and was admitted to the surgical wards of the Royal Infirmary, under the care of Mr. Joseph Bell. The limb was almost "dangling" and apparently hopeless, but after having adopted the process above described, it was observed that the dorsum of the foot blushed after the elastic webbing had been relaxed.

Some pieces of bone were removed, and by drainage and the usual antiseptic treatment of compound fractures, the boy made an excellent recovery with a useful limb.

I think this procedure might be used in order to ascertain whether a finger almost entirely cut through will live. It is recommended because of its simplicity and safety, and if well managed, it gives a very pronounced indication of the condition of the blood-vessels.

Pulsation in posterior tibial or in anterior tibial artery need never be pronounced "doubtful," and although an experienced surgeon takes many inexpressible points into consideration before deciding the question of amputation, the information to be gained by this proceeding will be valuable in many cases.

It may save house-surgeons much anxiety as to whether they are justified in attempting to save a limb very severely injured. If the blush of the return circulation shows itself, the part may be safely pronounced viable.

Although I have not had an opportunity of practising this manœuvre further than in the case above alluded to, I would suggest that in case of frost-bite, or in embolism—say of the popliteal artery—its employment will promptly show the extent of approaching gangrene. One might thus be enabled to amputate early, and obviate "waiting for the line of demarcation to form," with attendant risk of septic absorption.

A Case of Lacerated Wound Treated with Iodoform.

Dr. A. Mitra thus writes in the *Lancet:* Rajaul, a prisoner at the Kashmir Gaol, aged thirty-five received a wound in the hand and forearm on April 12th. He, together with other prisoners, was engaged in breaking stones on a hill close to the city of Sreemugur. A large block of stone came rolling down, and Rajual foolishly attempted to stop it. Soon after the injury, as he was being carried from the spot to the gaol, it was fortunate that Dr. Neve, of the Mission Hospital, happened to be passing, who took him to his hospital close by, stopped the bleeding, and rendered such help as he thought was necessary. I saw the patient next morning at the gaol, where I had deputed an assistant to watch him. I examined the wound, and found a large lacerated flap, including skin, muscles, tendons, arteries, and nerves, had been separated; the flap commenced four in-

ches above the wrist, extended along the middle of the hand, and curved round the web of the fingers' ends over the head of the metacarpal bone of the ring finger on its dorsal side. The second flap on the dorsum was more lacerated; it commenced at the second phalanx of the thumb, and curved round the ends near the pisiform bone. All the metacarpals except the first were fractured; the third metacarpal was divided into four pieces. I happened to meet Dr. Neve that morning, who remarked: "The wound is one of the severest I have ever seen." Conservative surgery in such a case of lacerated wound with extensive injury of all the tissues can hardly be justified; but as twenty-four hours had already elapsed, I was determined to give it a trial, without, however, entertaining any hope to preserve the hand. I kept the injured parts soaked with corrosive sublimate lotion (seven grains to a pint). On the third day I opened the wound; there was very little discharge. Dusting the wound thoroughly with iodoform, I covered it with oiled silk and bandaged with corrosive sublimate gauze. The wound was opened the next day, as the temperature of the patient rose to 100·6° F. in the previous evening. There were slight discoloration in the tips of the little and ring fingers. I decided on amputation, not of the forearm but of the fingers. I made an incision, commencing from between the web of the index and middle fingers, carrying it straight down to the pisiform bone and curving round along the dorsum of the hand to meet the point of commencement. Iodoform was used all along. The wound healed in twenty days. The rise of temperature for the first five days ranged from 100° to 101°. The man has now perfect use of the thumb and index fingers. There is no resulting contraction.

Remarks.—This case shows without repairing powers the tissues sometimes possess. It also establishes the great value of iodoform in the treatment of wounds. In my surgical wards, iodoform is used as the chief dressing, and it always secures for me rapid and aseptic healing. Iodoform dusting has been found more efficacious than ointment even with vaseline. My experience has, however, proved to a certainty that disagreeable symptoms often result from iodoform dressing. They are chiefly gastro-intestinal and nervous irritation. But I have never observed iodoformic fever; these internal manifestations do not come to my notice, because I strictly follow the plan of washing the wound before fresh iodoform is used. With this precaution, there is no fear of poisoning. The forty-eight cases given by König, where symptoms of poisoning supervened during the use of iodoform as surgical dressings, were probably treated without this necessary precaution.

Internal Urethrotomy.

Before The Harveian Society of London, Mr. Buckston Browne read a paper on the value and position of the operation of internal urethrotomy. He briefly traced the history of the operation, giving to Professor Syme the credit of teaching that the secret of success in dividing a stricture was to cut freely through it, and to Sir Henry Thompson that of showing that this could be done by the milder operation of internal rather than external urethrotomy. He then deprecated the use of all machinery in the external division of a stricture, and urged that the proper instrument was one which was practically a long knife. He be-

lieved that a feeling which existed against the operation in certain quarters was due to (1) the possibility of very serious consequences after the operation in unpracticed hands, and (2) the indiscriminate employment of the operation. The dangers of the operatiod, and the means of avoiding them, were then pointed out. While showing that in the treatment of stricture, internal urethrotomy should be the exception and not the rule, he pointed out that in certain conditions of stricture the operation was most desirable, and in some indispensable. It was of especial value in prostatic enlargement in cases in which the constant use of a catheter was impeded by a stricture. Advanced age was no bar to the operation. Mr. Browne also called attention to the use of internal urethrotomy in the treatment of perineal abscess when co-existing with urethral stricture. He distinguished perineal abscess from extravasation-abscess, and showed how the former did not at first communicate with the urethra. He showed that a prompt internal urethrotomy prevented the abscess-cavity from communicating with the urethra, but that if the abscess was opened only, urine issued by the wound in a few days.

Mr. Hurry Fenwick considered that the immediate value of internal urethrotomy was not the main question. All forms of operative interference gave immediate relief, and the statistics of mortality in each were nearly the same. The position which internal urethrotomy would take depended on the amount of permanent benefit it conferred.

Mr. Mansell Moullin thought hard cartilaginous strictures were much better laid open fully, and treated after Symes's method. He failed to understand why a catheter should be tied in except in case of hæmorrhage.

Mr. Lockwood was accustomed to perform internal urethrotomy for penile strictures, and found that afterwards the deeper complicating strictures often disappeared, or were amenable to simple forms of treatment. He was anxious to hear Mr. Buckston Browne's opinion on the question of the so-called "reflex strictures."

Mr. Bruce Clarke entirely agreed with Mr. Lockwood. Internal urethrotomy was admirably adapted for the treatment of penile strictures, but for deep strictures it was unquestionably a dangerous operation, and external urethrotomy, though more tedious, was greatly to be preferred. The class of impassable strictures was best treated by Wheelhouse's operation.

The President pointed out the extreme value of the paper, especially that part referring to the treatment of perineal abscess.

Dr. Alderson and Dr. Bayfield also spoke on the paper.

In reply, Mr. Buckston Browne stated that he did not believe in a penile stricture causing spasmodic stricture lower down; if another existed lower, he would divide that too. He was accustomed to tie in a catheter after operation, as he found nothing else so useful in preventing hæmorrhage. Serious renal complications might arise if the stricture was imperfectly divided.

Cyst of the Great Omentum.

Dr. J. C. Gooding thus writes in the *Lancet:* Miss ——, in 1878, when aged eighteen years, first noticed a lump the size of a hen's egg low down in the right iliac region, which, at the monthly periods chiefly, was painful. It gradually enlarged upwards till, at the time of my first visit in August, 1879, it had

attained the size of a cocoanut and reached two inches above and to the left of the umbilicus, and three inches below, extending back into the lumbar region. It was elastic, could be completely pushed across the abdomen to the left of the umbilicus, and pressed down to Poupart's ligament; there was most limitation to upward movement, and between it and the liver there was resonance. My first impression was that it was a renal growth, but the tumor could be moved away from the kidney without leaving any sense of void in the loin; it was freely movable in all directions, but less so from the ovarian site. The urine was healthy, and there was no constitutional disturbance. I diagnosed ovarian cyst with long pedicle. In March, 1880, the patient, at my request, saw Sir S. Wells, who wrote me that his impression was it was renal, but, having doubt, wished Sir W. Jenner to see the case with him, which he did a few days afterwards. The result of the consultation was that they both, "while doubting, inclined rather to the view of an ovarian tumor with a long pedicle than a renal cyst or tumor," and both agreed in advising, "in the absence of any urgent symptoms, no surgical interference."

During the summer of 1881 the patient began to suffer from sickness and occasional vomiting after meals, and a great deal of shooting and aching pain in and about the tumor. These symptoms much impaired her health; and interference, for which the patient was anxious, was determined on. The growth had now attained the size of a child's head of four years old, had equally enlarged without altering its relation to other parts, was as mobile as ever, and obviously contained fluid.

On April 27, 1882, Mr. Cardew gave ether and Mr. C. J. Newton assisted me. When the patient was anæsthetized the tumor retreated so much under the hypochondrium that it was obviously not ovarian (a confirmation of the value of anæsthetics for abdominal diagnosis—so well known, but so seldom employed), a short incision into the peritoneal cavity, confirming this, was extended to the umbilicus, and disclosed a white cyst covered by peritoneum; this was scratched through so as to admit the finger, which was swept round, breaking down strong areolar tissue. On seizing the tumor with a vulsellum a clear fluid gushed out; then a most tedious process of separation, facilitated by holding the thin-walled cyst up against the light, was effected by scratching through dense cellular tissue, its closely fitting envelope. There was no pedicle, the tumor was embedded in folds of the omentum, having the transverse colon immediately below it. There was no hemorrhage. The entire operation was conducted under carbolic acid spray—a practice, however, which I no longer follow.

The patient, very pallid and cold, but with fair pulse (60), was removed to bed and after a couple of hours the extremities became warm. During the first night there was much pain referred to the left shoulder and back. For thirty-six hours there was continuous sickness. On the second day the temperature was 100°, and the pulse 98–104. Barley-water and milk in small quantity were relished and retained. On the third day the temperature was natural, and the pulse 92. On the seventh day three sutures were removed, and the remainder on the tenth day; firm union had taken place. The progress to recovery continued uninterrupted, and the patient when last seen (September, 1883,) was enjoying good health.

The tumor much resembled an hydatid cyst, but it was not of this nature. Its origin (obscure) might have been due to a severe blow in the abdomen sustained some months before.

"Induration" of Hunterian Chancres in the Female.

Before the Royal Medical and Chirurgical Society, Mr. W. E. CANT contributed a paper on some Clinical Observations on "Induration" in the Primary Lesion of Syphilis in Women. The following results were founded on about 3300 cases examined in the Royal Albert Hospital, Devonport, during a period of six and a half years. In contradistinction to the generally accepted fact that in men induration is as a rule well marked, it is so in women far less generally. The induration, which is described as being circumscribed, limited to the base of the sore, and clearly marked off from the surrounding tissue in men, in women is, about as often as not, diffused a considerable distance into the tissues around, often very widely, not sharply defined from the surrounding tissues, nor circumscribed in the base of the sore itself. The most typical form of primary sore with its induration, resembling a disc of cartilage set in surrounding soft structures, described as being frequent in men, is seldom met with in women. Every variety as to the degree of development of the induration is met with in women; but there is a large proportion in which it is very slight (about one-third). In some of these slight cases it is impossible to affirm that there is any thickening at all present, and there is a small number in which none exists throughout the whole course of the sore. Induration is present in the early stage of the sore only in a small proportion of cases. The time of its occurrence in the course of the sore varies greatly; it may occur at almost any period of its course. It becomes most marked and developed towards the middle and latter part in many cases. Tables of cases of primary sores, grouped according to their clinical character, and showing "when first apparent," "characters at earliest period," etc., and also of five cases of infecting primary sore in which there was no induration, were appended to the paper.

Dr. C. R. Drysdale said the subject of induration at the commencement of syphilis had at times become much confused. He had gathered much the same impression as Mr. Cant, in his observations made at a small lock hospital. The initial chancre might be but little indurated in women. The tissues in the female genital organs were rather different from those of the male, and this condition probably influenced the occurrence of induration. In hard chancre of the lip in a woman, the induration might be quite "wooden." A large numuer of cases in the male might exhibit but slight induration. In his own experience, of 241 cases four-fifths occurred on the labia majora and minora. The initial hard sore might occur on the os uteri. He had not seen one on the vagina.

Mr. Harrison Cripps hardly agreed with Mr. Cant that the locality made no difference in the occurrence of induration. He thought position was everything. On the lip induration could easily develop. In chancre of the finger there might be absence of induration, even from beginning to end. Hunterian sores on the face and fingers indeed were generally free from induration.

Mr. T. Holmes said the paper differed from most records of observations in being a record simply of facts. No mere opinion was expressed in the paper. Works

of syphilographers gave a record of general impressions, not of actual facts of which notes were made at the time. He believed that the situations of the sores were given in the tables appended to the paper. The conclusions of the author were in accord with his own experience. He considered it a matter of regret that the Contagious Disease Act had been repealed.

Mr. R. W. Parker asked, if induration was not the test of a chancre, what was the test? What is the characteristic feature of a chancre? How much of the features was due to mere irritation, and how much to the action of the true syphilitic virus.

Dr. C. R. Drysdale said that it was not to be supposed that absence of induration meant identity of the Hunterian sore with a soft one.

Mr. Cant, in reply, said the situations of the sores were given in the paper; two occurred on the os uteri and on the vaginal wall. Some of the sores on the buttock were indurated—this in opposition to Mr. Cripps. Induration was the best character of a syphilitic chancre when present. His paper did not, however, deal with the characters of syphilitic sores.

Report of a Successful Case of Nephrolithotomy in a Youth Aged 15 Years.

Dr. Frederick Page, thus writes in the *Edinburgh Med. Jour.:* I was asked last November by my colleague Dr. Linmont to see with him a lad who had been under his care in the Newcastle-upon-Tyne Infirmary for some few weeks with well-marked symptoms of stone in the kidney. The youth was a clerk, aged 15 years, and had lived all his life in a healthy upland district at Beamish in the county of Durham. He had been always well cared for, and, with the exception of the symptoms I am about to narrate, had suffered from no illness nor from any accident. When he was about four years old blood was noticed in his urine, and he has had slight hæmaturia from time to time since then. Running, jumping, or lifting has usually been the exciting cause of the bleeding. Pain, however, has been a more marked symptom than bloody urine. He describes the pain as being often very acute, and latterly much more so, "like a knife passing through the left loin, round the belly into the left testicle, and down the inner side of the left thigh; sometimes, too, it shot across the loin." During the attacks of pain the testicle was retracted on the left side. Whilst under Dr. Linmont's observation he had several severe attacks of renal colic. He was obliged to rise several times during the night to make water, and on two or three occasions he passed a considerable quantity of red sand—uric acid crystals. Pressure over the left kidney at one well-defined spot gave rise to acute pain, and at this spot it seemed to me a calculus could be distinctly felt in the kidney. The youth was thin and remarkably anæmic, much more so than the slight loss of blood which he occasionally experienced would account for. Agreeing with Dr. Linmont as to the strong probability of there being a stone lodged in the left kidney, the case was transferred to me for operation.

On 9th November the kidney was exposed by an incision, 5 inches in length, at right angles to the spine, and pricked in various directions with a long needle, till a stone was detected situated deep in the kidney, at about its centre. The friable substance of the gland was readily broken down with the finger, and the

stone felt, but not reached, for a strong tough membrane separated it from the finger. With considerable difficulty this membrane was at length scratched through, and the stone liberated. The operation was a long one, and accompanied with considerable bleeding. The lad rallied slowly. At night, 8 hours after operation, his pulse was 88, and his temperature 97.5°. Next morning the temperature was 101°, pulse 106; and in the evening the temperature rose to 103°, and the pulse to 170, the breathing being very quick and painful. He was found to have double capillary bronchitis, with pleurisy, and remained in a critical condition for many days. On the day of operation and the day after there was blood in the urine, but on no other occasion. On the seventh day he passed 68 ounces of urine—the largest—and on the twenty-second only 10 ounces, the smallest quantity during any one day subsequent to the operation. The wound healed readily, and on the 16th of January he was discharged, his stay in hospital having been prolonged in consequence of the extreme severity of the weather.

The stone weighs 24 grains, and Professor Bedson, who has kindly examined it chemically, tells me it consists almost entirely of oxalate of lime.

Remarks.—The diagnosis of stone in the kidney resembles that of stone in the bladder in this particular: it cannot be positively affirmed that a stone is present in either situation from symptoms alone. The kidney has been often explored for the purpose of finding a stone when there was no stone present, and it is a sound rule in surgery never to perform lithotomy unless at the time of operation a stone can be felt with an instrument introduced into the bladder. In the case reported, all the symptoms of stone in the kidney were present, and I believe the calculus lay free in the pelvis of the kidney. The stone was readily found, but from its small size, and from its freedom of movement, not so readily extracted as is usually the case. The grave chest symptoms from which the boy suffered so severely were due, I believe, to the chilling effects of the spray used during the operation, and I very much regret its employment.

Trephining for Mastoid Disease with Paralysis and Aphasia.

Before the Academy of Medicine in Ireland, Mr. FITZGIBBON read a paper on a case of trephining for mastoid disease with paralysis and aphasia. A. E., aged 27, was attacked by earache on the left side in May, which continued for several weeks, when facial paralysis set in on the affected side. This disappeared, shortly after which facial paralysis appeared on the right side, with confusion of ideas and aphasia, and threatened loss of power of the lower limbs, indicating intra-cranial mischief. He trephined the left mastoid cells, removing a portion of the upper surface of the petrous portion of the temporal bone. After some days, matter escaped from the opening in the bone, and the patient recovered.

The President asked whether the suppuration was from an abscess, or from the track of the wound made by the trephine, and whether the paralytic symptoms resulted from local inflammation of the bone itself, or, possibly of the periosteum?

Mr. Wheeler said that he saw the patient, and came to the conclusion that she was suffering from phlebitis, perhaps a slight meningitis, and not improbably

from an abscess in the temporo-sphenoidal lobe. Two symptoms very characteristic of intracranial abscess were absent, namely, abnormally slow pulse and abnormally low temperature; but the existing phlebitis and meningitis would account for this. The want of power in the lower limbs was due to irritation of the medulla oblongata, perhaps from local phlebitis. The facial paralysis on the right side was probably caused by the irritation of the centre of the seventh nerve, carried from the left side, as the centres of both nerves lie close together. The defect in speech was probably due to the fibres of the left restiform body running upwards. At the consultation he strongly advised operation.

Mr. Story failed to see what object was gained by trephining the mastoid at all, since pus was found nowhere. Another point was that he did not see why the left ear was trephined instead of the right, as the lady had a running from both ears after scarlatina, and had paralysis of the facial nerve on the left side.

Mr. Pratt said he had seen eight cases of the kind. Of these, four were operated on and recovered, while two that were not operated on died, and he lost sight of the others. Pus welled into the wound when made by the trephine only in one case, but the pus that came afterwards appeared to come from inside the skull rather than from the wound itself; hence the advisability of the operation. He asked how Mr. Fitzgibbon stopped the hæmorrhage.

Dr. Cox mentioned the case of a woman, whom he had treated medicinally for similar symptoms with success. He asked how Mr. Fitzgibbon accounted for the paralysis, especially in the lower extremities.

Mr. Thomson inquired at what period after the operation was performed did recovery result? If the opening had given exit to any collection of pus, once the pus escaped there ought to have been some definite improvement. But the case seemed to have covered a very long period, with fluctuations.

Mr. John H. Scott asked whether the purulent discharge had a strong fœtor?

Mr. Bennett said the tendency of Mr. Wheeler's remarks was to recommend trephining as a remedy for all cases of otorrhœa. His own opinion, however, was that the only cases likely to be relieved were those in which the operation was done early for accumulation of pus in the mastoid cells, or where, with a bold stroke, an abscess of the brain was reached.

Mr. Fitzgibbon, in reply, attributed the paralysis to inflammation extending, in the first instance, to the facial nerve upon the left side, and the paralysis on the opposite side to reflex irritation extending to the opposite side of the brain. The loss of power in the lower extremities was due to inflammation extending to the medulla oblongata, arising from the pus between the dura mater and the bone on the left side of the cranium. Mr. Story's question as to what was gained by the operation, since no pus was got, had been answered sufficiently by Mr. Pratt. The hemorrhage was stopped by pressure with a piece of lint. Relief was given when he gave the pus free exit. The inflammatory condition had been going on, extending to the base of the brain, to the meninges and medulla oblon gata, and was subacute at the time of the operation; but the pain was relieved immediately the matter commenced to discharge through the trephine opening, and the patient never complained of the agonizing pain in her head, which she had done for a considerable number of days following the operation. The discharge was offensive. As to Mr. Bennett's objection to trephining in all such

cases, he had himself had a case in which Mr. Wheeler would have trephined, but in which the milder operation of incision answered the purpose quite as well. It was a well-known fact that the incision of inflamed bones often led to the recovery of a bone which otherwise would go on to destructive caries.

A Remarkable Case of Foreign Body Carried Ten Years in the Eye.

Dr. T. E. MURRELL thus writes in the *Jour. Am. Med. Ass.:* A student in the Canehill College, Arkansas, session of 1875–76, was making some hydrogen gas with iron filings and sulphuric acid in a glass retort. Just as the gas began to escape from the retort pipe, and while still much mixed with atmospheric air, he chanced to bring a lighted match close to the escape pipe, when an explosion took place. The retort was blown to atoms and the pieces of glass driven with great force in all directions. The young man received a severe wound in his right eye. The eye was found lacerated; a transverse cut in the cornea extending from the sclera on one side into the sclera on the opposite side. The supposition was that a flying fragment of glass had done the work by an oblique stroke, and had passed on.

The eye was treated antiphlogistically, and although considerable inflammation and pain followed, in a few weeks all became quiet, and a transverse corneal scar marked the seat of injury. Some six years after this Mr. F., then a lawyer, consulted me. I found right eye as follows: Extending some two lines into the sclera inwardly and outwardly and transversely through the diameter of the cornea was a somewhat flattened linear cicatrix, into which the iris was drawn with obliteration of the pupil. Above and below was clear cornea, through which could be seen fairly normal fibrillated iris. The scleral conjunctiva was of normal appearance, the eye appearing perfectly quiescent. He had had no trouble with it since the recovery from the accident, and came to me for the purpose of having an artificial pupil made for optical purposes. I found, however, that he had no perception of light, and explained to him the uselessness of such procedure. Taking into consideration the extent of the wound, involving as it did the ciliary body on two opposite sides, together with the fact that the iris was also extensively incarcerated, I warned him particularly of the dangers of sympathetic trouble in the other eye eventually.

Some two years ago Mr. F. again visited me. I found the eye *in statu quo*, with no redness, pain or irritation, or weakness of his left eye. I repeated my injunctions of caution, and now, upon conservative principles, advised enucleation of the injured eye. He returned home and occasionally wrote me, stating that he was afraid, since my information imparted to him of the dangers of sympathetic trouble, to carry the eye, and would at his convenience come and have it removed.

In February last he came with his mind made up to have the operation performed. At this time the scleral conjunctiva was perfectly clear, there was no tenderness over any part of the ciliary body, no pain, and the other eye was clear, strong, and V=Sn $\frac{20}{20}$ sharp. He was a hard student, and up to this time had spent many hours daily in close application to his law books. He said, however, for a year or two, his good eye showed more disposition to tire than

formerly after much work, and concluded that one of the symptoms of sympathetic irritation was upon him.

I put a drop or two of cocaine muriate solution, 4 per cent., into the conjunctival sac, and in a minute after injected 10 minims of the same into the circumscleral tissues at four points. Five minutes later I proceeded to enucleate in the usual way, which was entirely painless, the patient and I carrying on a pleasant conversation all the while. When finished and the hæmorrhage staunched, I examined the eye in his presence. He asked me to look carefully for a piece of glass, as he could not but believe some fragment had lodged in the eye. I was disposed to make light of his opinion, and stated as my reason the entire absence of irritation of any sort in the eye, which would hardly have been the case with so irritating a body as a piece of glass lodged in the eye. The eye was divided into halves through its equator. In the interciliary region, occupying the position of the lens, was a mass of lymph. The other structures of the uveal tract, I should say, were entirely atrophic, and the vitreous chamber filled with straw-colored water. On opening into the lymph deposit the knife came upon a hard body which, on further exposure, proved to be glass. The encystment was complete. The glass measures 15 millimetres long, 12 millimetres wide, 1½ millimetres thick, and is a parallelogram with one corner broken off. Its position was in a vertical plane parallel with the iris, and fully as large as the whole iritic surface.

The complete encystment of so large a body, with such sharp cutting edges, exactly in the ciliary region of the eye, with such extensive involvement of the ciliary body and incarceration of the iris, with entire absence of tenderness, pain or redness of the eye at any time, taken together, serve, in my opinion, to mark this case as one unique and worthy of record.

Brain Surgery.

The *Brit. Med. Jour.* says: "So that henceforwards there shall be no chyrurgeon, however ignorant in the performance of his art, which * * * may not perform this operation without any danger or fear of danger of touching the *dura mater*, the hurting whereof puts the life in jeopardy."

Thus speaks Ambroise Paré in the middle of the sixteenth century, fully aware that the opening of the dura mater in a septic wound was the most frequent cause of death in compound head injuries, and later, in the next century, Percival Pott, whose liberal use of the trephine subsequently evoked the abusive criticism of John Bell, realized the danger of following up removal of the bone by incision of the dura mater. The semi-religious respect with which the peritoneum was regarded up till thirty years ago finds its exact parallel in the dread of operative interference with the arachnoid membrane. A disputation similar to that which hindered the reform of stereotyped notions concerning the peritoneum seems likely to be imitated at this era of the birth of brain surgery proper, if certain views, which have recently found expression, are reiterated. There is, however, one fundamental difference between the introduction of surgery in the treatment of abdominal and cerebral disease respectively. In the former the morality was at first high, in the latter it is low. The statistics of the splendid results obtained by Sir Spencer Wells in the first series of abdominal

cases are in every one's hands. Of recent cerebral operations we understand that Mr. Victor Horsley has operated in ten cases with one death, and that from shock (the cases including four tumors of the brain); that Dr. MacEwen has had three successful cases and no deaths; Dr. Hahn, of Berlin, one successful case and no death. These, with the pioneering operation (unfortunately fatal) of Mr. Godlee; a successful Italian case, recently noted in our columns, and a case by Mr. Bennett May, show that we already possess a series of fifteen successes and three deaths (two of the latter being due to shock, the operation having been postponed too long). But we would draw attention to the fact that in this, as in every new point of departure in medical science, stress is to be laid, not on statistics of a few early cases, but on the facts of each, individually. Further proof of the value of surgical interference in cerebral disease is evidenced by the two very gratifying cases lately published in our columns; namely, one by Dr. Gowers and Mr. Barker, on December 11th, 1886, and one by Dr. Greenfield and Mr. Caird, in the *Journal* of February 12th. In reviewing the circumstances which led to the performance of the operation in these cases, it is to be noted, in the first place, that in both instances the prognosis was inevitably fatal, a state of things which, in spite of high authority, we venture to say always justifies any line of surgical treatment which is not in itself very dangerous to life. Probably every case of deliberate operation upon the brain that has been or will be performed for some time to come, has been or will be undertaken with this circumstance standing first among the factors of justification. If only one case, therefore, recovers with life, it is clear that the surgical treatment is sound, since all other was completely inadequate. Judging from slight indications, such as those to which reference is made above, the profession requires at the hands of those who are practising in this new direction very full accounts of the cases thus relieved, and, above all, exact information on that point with which this article is begun, and which commends itself most especially to the mind of the public, namely, the guarantee that the treatment is not in itself dangerous.

The assurance of this, so far as deliberate operation on the previously uninjured head goes, is sufficiently easy, since it means nothing more than the thorough observance of certain precautions, mainly antiseptic principles. It is, however, a different question when we consider such cases as those which form the subject of this article. In these instances, as a rule, the contents of the cerebral abscess are foul; and though the subdural space has to be penetrated to allow of the escape of the pus, septic infection of the meninges, which, as we have seen, has been known for centuries to be the cause of death in traumatic lesions, is, in these instances, conspicuously absent. The explanation of this is simple. As noted by Dr. Caird during his operation, simple meningitis seals the arachnoidal surface of the brain to that of the dura mater, just as in the same way simple peritonitis shuts off visceral abscesses, which, by bursting into the abdominal cavity, would infallibly cause death. The infective (septic) pus liberated from the cerebrum by the incision, and already flowing out rapidly in the direction of least resistance, is thus prevented from spreading beneath the dura mater. Fortunately, too, the intracranial pressure lends valuable aid in the obliteration of the subdural space. The actual surgical position, therefore, of this operation of trephining for cerebral abscess, is exactly that of operating for

any other visceral suppuration, and may be undertaken with as little, if not less, hesitation.

The operation being thus so justifiable as to be called for, the next problem is the accurate application of such treatment; in other words, the diagnosis. We suppose that the reflection of most who read the reports of these two brilliant cases will be the somewhat discouraging one that the diagnosis in each was so uncertain as to afford little guide for future action. It is, of course, very obvious that, since the cerebral symptoms due to irritative lesion and destruction of certain portions of the brain—in these two instances the temporo-sphenoidal lobe—are masked in such cases by secondary symptoms due to pressure, etc., the diagnosis must remain somewhat obscure, even when cerebral physiology shall have discovered the functions of all parts of the brain. Meanwhile, however, it is obvious that, with the wealth of clinical research existing among the profession, a great stride forwards might be taken if all cases of cerebral abscess were most fully recorded, and if a thorough revision and comparison of the reports thus obtained were made in summary of the facts. Indeed, the minutest symptomatic detail must not be allowed to escape observation; as, for instance, the onset, spread, and character of the optic neuritis, as compared with that arising from other causes, etc. The differential diagnosis of cerebral abscess, which is a surgical emergency, from those cases which recover with or without the aid of drugs, is a difficult question, the answer to which would be honorable to the finder and valuable to humanity.

A New Method of Treating Wounds in Accordance with the Natural Laws of Healing.

Dr. David Christie thus writes in the *Med. Press:* I propose to bring under your notice a simple and successful method of treating wounds, and the circumstances which induced me to adopt it. Before attempting this, I must briefly give the ideas entertained by others on this subject up to the present time. Old authorities say, "wherever effusion of fibrine is attended with a continuance of acute inflammation, or when there are certain defects in the composition of the blood, the fibrine softens down, and with the cells, which have undergone certain changes, become a creamy liquid called pus." And of healing or repairing they say, "the material employed is liquor sanguinis or the fluid part of the blood; but especially that constituent of it which has the power of spontaneous coagulation, which is commonly known as *fibrine* or *coagulable lymph;* and that it does not heal until the lymph *is* coagulated; and that whatever favors inflammation is hostile to repair."

For a considerable time past it has been an established fact that subcutaneous wounds healed quickest; it was afterwards ascertained that the reason why open wounds were slow to heal, was that germs entered them, causing decomposition and the formation of pus. This theory led to another called the antiseptic system; its doctrine is keep away certain organisms and drain the wound, then inflammation and suppuration will be prevented. All this amounts to how a wound heals, and how to guard it from those things that prevent it healing. Now, I have reason to believe that I have fonnd a way that takes advantage of all this information, but in addition to it, it *assists* the wound to heal from the moment

it is employed. I discovered it when I was not looking for it at all; and this is how it happened: A little girl came to me, in whose hand a few days previously I had stitched a large deep wound which bled profusely every time it was dressed, To stop the hæmorrhage I touched it with iron alum; the bleeding ceased in a few seconds. Next day I examined it and found the wound very clean and healthy, it subsequently healed in a very short time. A few days afterwards a lady came under my care to have a fatty tumor removed, she was rather enæmic so I thought I could not be too careful to prevent loss of blood, I made an incision six inches in length down to the capsule, applied the iron alum, about a teaspoonful of blood was lost, enucleated the tumor and tied a small artery at the bottom of the wound, removed the coagulated blood, brought the parts together with a continuous suture, put a piece of surgeon's lint over it slightly moistened with glycerine and water, over this oiled silk, and over it padding and a bandage to press the surfaces accurately together; next day I found the dressing slightly blackened by the iron, but no perceptible discharge or swelling; dressed as before, on the third day removed the sutures, and fourth day found it completely healed except the part occupied by the ligature. Next case was a man having a loose cartilage in the knee-joint larger than a garden bean. I made an incision in the usual way down to the ligament, an inch and a half in length, applied the styptic, only a few drops of blood escaped; then cut through the ligament and removed the loose cartilage; brought the wound together by a very narrow strip of adhesive plaster across the centre of it; dressed as in the former case, ordered dressings to be changed next day, but not afterwards, and the limb to be kept at rest. This person lives sixteen miles from my residence, but I got a letter from him telling me that on that day week from the time I performed the operation the wound was completely healed and the functions of the joint perfect. Dr. Hunter, of Ramelton, assisted me at both operations, and knows all about them.

The last case I will refer to is that of a young man who received a deep lacerated wound between the metatarsal bones of the first and second toe, caused by treading on a sharp piece of iron, there was profuse arterial hæmorrhage, as the position would lead one to expect. I endeavored to stop it by applying a piece of iron alum, but failed, owing to the depth and shape of the wound. I then put a considerable quantity of powdered iron alum into and on it, tying over it some wadding: then the bleeding ceased. Next day I examined it, and with difficulty removed the dresssing, as the effused blood had set like cement; there was neither discharge, swelling, nor the slightest appearance of inflammation, and almost free from pain, so much so that on the third day he resumed his usual employment in the fields. This tore the wound open again; I was obliged to put a suture in it, touched it with iron alum, and it was completely healed in about six days.

Then I thought I was in duty bound to investigate the matter as far as I could, and bring it under the notice of others, who had more leisure and opportunities of doing so than I had. I began by trying the action of all the styptics on some fluid I had removed from a hydrocele; most of them made it milky or creamy, the perchloride of iron gelatinous, but it did not adhere to the test tube; having twice seen it act as an escharotic in scalp wounds, I gave myself no further trouble about it. A saturated solution of iron alum instantly converted it into

a cheesy mass, firmly adherent to the test tube; this, after exposure to sun and air for a month, has undergone no change, except contraction from evaporation; the iron alum added to the same fluid in a fœtid state instantly coagulated it and deodorized it as much as carbolic acid did. From all this it is evident that this medicine has a character entirely different from any other of its class, for although the most powerful coagulator of albumen, and antiseptic, yet it has no irritating effect.

Two Cases Illustrating the Diagnosis and Treatment of Foreign Bodies in the Nose.

Dr. J. Middlemas Hunt thus writes in the *Glasgow Med. Jour.:* The following two cases, which came under my notice recently at the Newsham Dispensary, will serve to illustrate a few points in the diagnosis and treatment of foreign bodies in the nose; points which are not, I think, sufficiently insisted upon in our surgical text-books.

The first case was that of a boy, aged 4, who was brought by his mother on account of a fœtid discharge from the right nostril, of eight months' duration. He had already been under treatment at another public charity in this city, where the mother was told "the disease was constitutional," and a nasal douche and tonics were ordered. When I saw him he certainly had quite the look of a child suffering from strumous ozœma, with thickened, excoriated upper lip, and eczema of both anterior nares. There was no history of the introduction of a foreign body into the nose.

On examining the right nostril, it was found to be completely obstructed about the middle of the lower turbinated bone by what seemed a collection of mucus, but on trying to remove this with a fine forceps I found it was only the covering of a foreign body which slipped from the grasp of the forceps. I, therefore, bent the point of an ordinary probe, passed it behind the obstruction, and easily succeeded in dragging it forwards. It was a cherry stone. Beyond prescribing an ointment for the eczema of the nares, there was no other treatment. A week afterwards, when I saw the patient again, the discharge had ceased and the fœtor was gone.

The second case came under my notice a week later, and illustrates a similar condition, though detected at a much earlier stage. The patient was a child 2½ years old, who was brought to the Dispensary on account of obstruction of and discharge from, the left nostril, which had only been observed a few days previously. No cause was assigned, and no fœtor had been noticed.

In this case, there was nothing to observe about the child except the blocking of the left nostril with half-dried mucus, such as one sees in an ordinary nasal catarrh. After the removal of this dried secretion, however, I came upon a hard substance a short way within the nasal orifice, which, as it presented a sharp edge, I removed with forceps. It was half of a damson stone. My impression was, that it had only been in the nose for a few days, and this was confirmed by the statement of the mother, that the child had been eating damsons about a fortnight previously. The secretions around it were already quite fœtid.

As regards the diagnosis and treatment of foreign bodies in the nose, I think the following rules may be laid down as the safest and most practical lines upon

which a surgeon can proceed. They guided me in the above, as they had done in previous cases, and I believe that if acted upon they will at least prevent an erroneous diagnosis being arrived at.

I. In all cases of discharge from the nose, (especially if fœtid or unilateral), thoroughly cleanse the nasal cavities by means of sprays, syringing, or forceps, as a preliminary step.

II. Examine the nasal fossæ completely and carefully by means of speculum and mirror. It is not sufficient merely to raise the tip of the nose with the thumb and look in. You will see very little indeed by such a method, especially in children. If you have no nasal speculum, make one by bending a common hair-pin about an inch from its rounded end, or use an ear-speculum.

III. Having detected a foreign body, do not try to remove it by douching through the opposite nostril, as there is danger of fluid entering the middle ear by the damming back of the current on the obstructed side. This is no merely theoretical objection.

IV. Where the foreign body presents a sharp edge, extraction is best managed by forceps. Since a rounded body, especially if covered with mucus, will probbably slip from the grasp of the forceps, it is best removed by passing a bent probe or scoop behind it and dragging it forwards.

The above rules apply equally to the removal of foreign bodies recently introduced. The *skilful* use of forceps, or probe, is even less objectionable than the "pinch of snuff" treatment, or any of the other ingenious but disagreeable methods usually recommended. These reached a climax in a recorded case, where an emetic was administered and the mouth held so as to wash out the foreign body by means of the contents of the stomach!

Cocaine is of great value in these cases, not only in reducing the sensitiveness of the mucous membrane, but also in contracting the spongy tissue over the turbinated bones, thus facilitating both examination and extraction.

Cancer of the Lip.

Dr. W. ANDERSON thus writes in the *Glasgow Med. Jour.* J. H., aged 56.—In October, 1881, this man presented himself suffering from a recurrence of cancer of the lower lip. An operation, I was told, had been performed more than a year before he applied. A V-shaped gap of some depth existed, and the edges of that, and to a great extent the edges of the lip on each side of it, were thickened and ulcerated. The whole chin was thickened, and various cervical glands were enlarged and hardened. The general health and the spirits of the patient were good. I had many misgivings about operating, but yielded to an "inward" plea that a few months' respite might give the chance of death from something less horrible than the extreme results of cancer. Under chloroform the whole lower lip and the chin were included by a deep incision. The vessels being secured, this was carried to the bone, and the soft parts separated. An exfoliation was found adherent. The second right lower molar tooth being absent, the jaw was divided through its place, and subsequently through that of the second left incisor, and the included portion of jaw removed. Then followed the removal of several lymphatic glands. For restoration an incision was made from the lower edge of the wound vertically in the middle line to the episternal hollow, and one

transversely to its lower end to the posterior border of each sterno-mastoid muscle. The flaps were dissected back till it was possible, without any tension, to raise them up in place of the parts removed, and to adjust them with horse-hair sutures in the middle line as far down as the larynx. Similarly their upper edges were adjusted along the line of incision that began in the outer portion of the upper lip on each side, and was carried within view of the edge of each masseter muscle. A solution of permanganate of potash in a bottle, with a tube leading from it, suspended over the bed, afforded ready irrigation. A pad of oakum under a bridle bandage, changed daily, was a very satisfactory dressing. Union throughout a large extent of the lines of incision had taken place by the third day, and by the twelfth day, when the man left for home, granulation over the larynx, and lower down was well advanced.

The man called a year ago to show himself, and I have reason to believe the reports which show him to be now, as then, free from return of the disease, and in good health.

Thomas Knott, aged 48. This patient had been affected with cancer of the lower lip for seven years when he came in the hope of being operated on in February last. In his case it was necessary to remove the soft parts more fully than in the previous one, to the extent in all of 5 inches by 3. A shaving of bone was removed to reduce the chance of tension of skin flap, though the lower jaw was sound. A lymphatic gland near the posterior border of the left submaxillary gland, and one under the floor of the mouth, were removed, and the neighborhood touched with solid chloride of zinc. A portion of the substance of the salivary gland was hardened, and removal was thought of. Second thoughts suggested "hypertrophy from irritation," and it was spared, very happily, seeing that a few applications of iodine brought it to a natural state. The patient did well, and a recent message—he lives between 400 and 500 miles away—says the lip is all right.

The above two were the last of a series of seven advanced cases of lip cancer, five of the lower lip, two of the upper. The first two of the lower lip recurred, and brought about death within a year, and taught the necessity of keeping well wide of the disease. The third kept all right for three years, and died within six months of recurrence in the deep cervical lymphatics. Then followed the two cases of removal of the whole upper lip. One, a female, died within a year of a bodily ailment, without recurrence; the other, a male, operated on six years ago, remains free.

The question in advance lip-cancer as to the propriety of operating, is in some degree answered by the first of the two cases detailed. How far might one go in the attempt at removal? Very considerably further than the details given. More advanced cases might be attempted, and the line of incision for removal carried as far back as the space between the submaxillary glands extends. For restoration, the vertical incision might go as far as the manubrium sterni, and the transverse one cross its termination. Should the lower jaw be very obtrusive, and so put the flaps on the stretch, the saw would adapt it to circumstances, and in a very desperate case it might be wise to remove its middle portion, whether apparently sound or not, seeing that the line of the fold, so very closely attached, and not readily cleaned away, might prove infiltrated. To

this I have sometimes attributed the recurrence in my second case. As to the glands, the freer the raising of the soft parts, the easier the search for them, and the likelier their removal. These are the days of "rescue to the uttermost," and possibly the result of J. H.'s case may encourage others, like myself, obliged to learn what can be carried through by *trying*.

The Treatment of Syphilis by Mercury.

Before the Medical Society of London, Mr. E. MILNER read a paper on the different modes of administering mercury in syphilis, and the indications for their application. He gave some of the results of his experience of twelve years' outpatient practice at the Lock Hospital, with a view of arriving at some definite conclusion as to what preparation of mercury should be employed in order as rapidly as possible to get rid of the visible signs of syphilis. In the majority of cases blue pill is as good as blue ointment and green iodide as Donovan's solution; but even in these cases he thought that more accurate and more careful observation in practice would render such an admission unjustifiable. He dealt with three of the most common methods of administration: 1. Some of the cases in which green iodide should be used. 2. Some of the cases in which inunction should be practiced. 3. Some of the cases in which the vapor of calomel should be employed. Of all the syphilitic rashes, the most evident, most persistent, and perhaps the most difficult to combat, is the vesicular syphilide. It most frequently occurred in light-haired women who drank large quantities of wine as distinguished from spirits. The vesicular may be associated with an early tubercular syphilide, and this usually in dark-haired people during cold weather, and in the under-fed and under-clothed patients of anxious temperament. In the first of these two classes green iodide with Donovan's solution, in large doses, was most valuable; in the second class the inunction of the German preparation of blue ointment has excelled all other methods of treatment. In billiard-markers, some actors, barmaids, actresses, and commercial travelers, who drink freely and sit up late, the syphilitic rash is apt to become angry, excessively red, and marked. In spite of the diarrhœa, give green iodide in large doses. Donovan's solution, with soda and iodide of sodium will assist, the latter salt being better than the potassic salt. The keeping of late hours materially influences the character of syphilitic eruptions. These people often have a thick oily perspiration which interferes with the nutrition of the skin and initiates the manifestations of syphilis; it was perhaps one of the causes of the so-called gouty character of the syphilide. Barmaids present the reddest and most angry syphilitic rashes, and the lesions are most difficult to treat. Such might be named "barmaid's syphilis." For these cases green iodide of mercury was the best preparation. In those who drink and never take care of themselves green iodide was next best to inunction, and would probably, under all the circumstances of the case, prove most efficacious. Green iodide of mercury is the most available remedy with patients who sit up late, who have light hair, and drink freely. The typical case for the green iodide would probably be the light-haired degenerated lady who sits up all night playing the piano at suburban parties, who eats but little, but refreshes herself frequently and takes a little brandy before retiring to rest. The German ointment is less strong, contains more suet, and is harder and pre-

ferable to that of the British Pharmacopœia. It salivates severely less frequently, and produces a more permanent effect. Many cases of primary syphilis in healthy, abstemious, light-haired men will be benefited by mercurial inunction. Patients with dark hair treated in this country with inunction, though they may almost avoid syphilides, may suffer severely from a form of sloughing sore-throat. Inunction in the late stages is a refuge for the destitute, but rarely it may give gratifying results. Large syphilitic testicles, secondary gummata, and syphilitic nervous disease may yield like magic to inunction. Inunction is most useful in the early stages with healthy, light-haired, abstemious patients with a primary sore, and the German ointment will almost certainly cure the distracted married man who has had syphilitic lumps for many years. To rapidly get rid of sores the local administration of mercury in the form of the vapor of calomel is of material assistance, whether the sore be the smooth, flat, indolent button, or accompanied by destructive ulceration of the glans penis. The vapor is also valuable in ulceration of the extremities, especially the legs, syphilitic in their origin, but frequently associated with a weak state of constitution, or, more frequently still, associated with a too rapid or indiscriminate administration of mercury. In certain cases, where mercury cannot be administered internally, the vapor of calomel locally applied is of great assistance, as also in the red, angry, tubercular eruption on the forehead along the line of the hat leather, and in the destructive ulceration of the fauces in late secondary syphilis.

Mr. Brudenell Carter referred to the syphilitic lesions of the eye, especially of the retina, which were met with in the tertiary stages, and especially in those individuals in whom the mercurial treatment had been inadequately carried out.

Dr. Drysdale could not agree that mercury was the only treatment of syphilis, and spoke of the probable germicide effect of mercury and iodine.

Dr. Lauder Brunton said that it was very difficult to explain the *modus operandi* of mercury and iodides in syphilis, for the pathology of this disease was still imperfectly known. Perhaps they acted as germicides.

Mr. De Méric considered inunction was an uncleanly method. He had seen many cases of tertiary syphilis which were benefited by mercury.

Dr. Althaus alluded to other methods of introducing mercury than those given in the paper. He spoke of hypodermic injections, lanoline inunction, and the oleates, all of which methods he had employed with success.

Dr. T. K. Salter had had a syphilitic chancre on the finger, treated for nine months by calomel baths, and without any secondary symptoms having appeared.

Mr. Milner, in reply, alluded to the baneful influence of large doses of iodide of potassium. Mercury was practically indispensable.

Renal Surgery.

Dr. T. F. Chavasse thus writes in the *Lancet:* "The surgery of the kidney has made of late years many and great advances, but there are still practical points open to discussion and to improvement. Some of these I propose to consider with you. As a basis, and in order that the examination may be made more complete, I have selected fatal cases in which post-mortem examinations have afforded opportunities of verifying our diagnosis and discovering sources of error.

Case 1.—A warehouseman, aged twenty-seven, was admitted to the General

Hospital on July 6th, 1886, under the care of my colleague, Dr. Saundby. For three years, on and off, pain had been experienced in the left side, but latterly the pains had been centered in the back.

On admission, there was a slight swelling, more or less lobulated to the feel, and dull on percussion, to be detected in the left flank, extending forward to a point below the umbilicus. An examination of the urine showed that the average daily quantity passed was thirty-five ounces, that the reaction was acid, the specific gravity 1014, and that it contained albumen, blood, and pus. With regard to the pus, Dr. Saundby noted that the quantity was about one-fifth of the deposit in a conical glass—viz, two ounces out of ten. At this stage of the proceedings the patient declined to submit to any operative treatment, and left the hospital on July 12th.

He was readmitted on August 4th, as the tumor had increased in size, and a few days later came under my care. After consultation, as a renal calculus was suspected to be the cause of the swelling, it was decided to explore the kidney through a lumbar incision. This was accordingly done on August 10th. On exposing a portion of the viscus, it appeared firm, but somewhat tense. The organ was incised, and more than eighteen ounces of purulent fluid were evacuated. The forefinger introduced into the wound, after a little search, detected this rough tuberculated calculus, somewhat triangular shaped, weighing 80 gr. It was removed, and careful examination made by my own finger and that of my colleague assisting, failed to detect anything further. I was then warned by the anæsthetizer that the patient was much collapsed, and that the operation had better be concluded as rapidly as possible. The kidney was therefore irrigated by means of a tube introduced into the wound with a weak warm solution of boracic acid, and a large drainage-tube inserted. The whole operation only lasted half an hour, but the patient when removed to bed was in a state of extreme collapse. After the application of restoratives his pulse improved somewhat, but life was with difficulty maintained. Great pain was complained of in the region of the wound two hours after the operation, and one-eighth of a grain of morphia was administered subcutaneously. The discharge was profuse, and necessitated a change of the dressings eleven hours after the operation. After this the cold perspirations and other symptoms of shock seemed to be improving, but sixteen hours after the operation he suddenly but quietly died. A few ounces of bloody urine were passed per urethram between the time of death and the completion of the operation. Unfortunately the friends declined to permit any regular examination of the body. The left kidney had therefore to be removed by merely enlarging the lumbar wound. The condition of the other organ could not be ascertained. The kidney here presented shows total disorganization; it is enlarged and divided by septa into numerous abscess cavities. Practically no cortical substance exists. From the recesses of the pouches numerous small calculi (about fifty) were washed out. Here are some of them, varying in size from a millet-seed to a pea. The organ itself was hardened in spirits for a month, and then laid open. Another and a larger calculus than the one removed was disclosed, firmly impacted in the top of the ureter, and virtually obliterating this tube. Its weight was 38 gr.

In this case surgical treatment was too long delayed. To obtain the greatest

possible benefits from operative measure, renal calculi must be sought for and removed before destruction, and consequent abscess have resulted. Doubtless, reference to cases within one's own knowledge, and to the literature of the subject, shows that a suppurating kidney may contract and heal marvellously well after efficient drainage has been established and all irritants removed, but then it can only work as a very much damaged organ, while an earlier operation may be the means of restoring its powers to nearly normal. Surgically speaking, the signs and symptoms most to be relied upon for the diagnosis of renal calculus where no tumor exists, the patient being otherwise healthy, are the following: 1. The presence of blood in the urine, especially after exertion. 2. Unilateral pain passing down the ureter towards the testis. 3. Pain elicited by deep-seated pressure in the lumbar region, between the last rib and the iliac crest, just external to the erector spinæ muscle. 4. The presence of uric and oxalate crystals in the urine as revealed by the microscope. With such symptoms the surgeon is fully justified in making a lumbar exploration of the kidney, as he is also, I think, in those cases of chronic nephralgia depending on uncertain causes which milder means and medicines have failed to remedy. Even if no stone be detected, instances are on record in which the patient has obtained prolonged relief. The explanation may be that the division of the lumbar tissues and of the renal capsule lessens the existing tension.

The shock following a surgical examination of the kidneys varies very much. In some instances I have seen it marked; but in an individual otherwise healthy and free from any renal suppuration it is generally slight. The death of this patient was somewhat of a surprise, and it is a matter of regret that a complete post-mortem examination was not permitted, in order that the conditions of the opposite viscus might have been ascertained. According to the statistics of Professor Gross, based upon seventy-two cases of incision and drainage, thirteen fatalities occurred. In 32.20 per cent. of the remainder a renal fistula resulted.

In suppurative lesions of the kidney permitting operative interference it is, I think, better that nephrotomy and drainage should first be undertaken, and the course of events watched. The surgeon is then afforded an opportunity of seeing the effects produced upon the opposite kidney. If the pus soon diminishes and disappears from the urine, the organ is probably sound. The lumbar incision, at the time of the operation, throws no light upon the important question as to whether the patient has another kidney. The abdominal does not assist much more; it certainly reveals the fact of bare existence, but it can give no information with regard to the working condition of the organ. A permanent sinus of a troublesome nature may remain after the drainage, but if nephrectomy has ultimately to be resorted to, the kidney is more or less shrivelled and easily shells out. Statistics show that such a removal through a lumbar wound gives the lowest mortality rate—viz., 9.33 per cent.

Reference must be made to the difficulty encountered in an examination of a kidney for calculus, in which no marked disorganization is present, The viscus having been exposed by means of a lumbar incision, the surgeon must not be satisfied by exploring merely with a series of needle punctures. If these fail to detect, the cortical structure must be divided, and either a bent silver probe or a small-sized child's sound introduced into the pelvis of the organ, and the whole of its in-

terior investigated. This incision need not be large, and may be made either at the outer border, or, as suggested by my friend Mr. Lloyd, at the lower edge of the organ. This little wound, it is true, causes a slight hæmorrhage, but it can be easily restrained by sponge pressure. In a case reported by Dr. Tiffany* the hot blade of a thermo-cautery was successfully substituted for the knife in order to avoid this bleeding.

CASE 2.—On May 12, 1885, I exposed the right kidney of a woman, aged twenty-two, who had suffered from pyuria for nearly three years, and at times from pain referred to the regions of the right kidney and ureter. The pus in a conical urine glass formed a deposit of one inch and a half, and the patient was much emaciated. I "needled" the kidney in nearly a dozen places, but failed either to find a stone or to tap an abscess. The patient suffered a good deal from shock, but recovered from this to sink later on from exhaustion.

At the necropsy, on section of the right kidney, an abscess cavity the size of a walnut was found at the head of the organ, occupying the portion of three pyramids and their expanded medullary substance. This abscess cavity communicated with the ureter. To the top of one of the pyramids a small phosphatic stone was found adhering. The capsule of the organ could be readily removed, and its surface was smooth and pale. Numerous small abscesses could be seen in the cortex. The lower portion of the kidney looked fairly healthy, and, although pale, the cortical substance was of good thickness and consistence. The ureter was greatly thickened and adherent to surrounding structures; its lining membrane was thickened and studded with minute soft bodies the size of a millet-seed, intimately adherent to, and apparently in the substance of, the mucous coat. The opening into the bladder was unobstructed. The left kidney weighed 6 oz., and was deeply congested, but the pyramids appeared normal. The bladder was much contracted.

At the time of this operation I did not fully appreciate the necessity of incising the cortex and sounding the pelvis in those cases where the exploring needle failed to detect any abnormality, and, as a consequence, a fair-sized abscess and a small piece of stone remained undetected. For the want of a sufficiently thorough examination of the pelvis of explored kidney by means of an incision and a sound I have no doubt that other operators have met with the same ill success that I did in this instance. The ultimate result would probably have been the same; but the condition of the urinary tract, as revealed by the sectio cadaveris, proves the uselessness of resorting to nephrectomy in cases of so-called tubercular kidney. The affected organ may be removed; but the disease is present in other parts of the urinary apparatus, and the whole disease is not removable. This thorough examination of the kidney pelvis by incision of the cortex is a decided advance, but may sometimes prove fallacious.

CASE 3.—The enlarged kidney here shown is the right viscus of a man, aged thirty-one, who had suffered with marked symptoms of renal calculus for ten years. Through an oblique lumbar incision I failed with needling to detect any stone. The cortex was therefore incised for three-quarters of an inch near the outer border of the organ, and with a large bent probe I explored the pel-

* Transactions of the American Surgical Association, vol. iii., 1885.

vis, as was thought at the time, most thoroughly and effectually, yet no calculus was detected. Unfortunately the man died some days after the operation with symptoms of septic poisoning. Plenty of urine was passed after the exploration, and at the end of the second day most of it, to the naked eye, was free from blood.

The following is the report of our pathologist, Dr. Crooke: "On introducing the hand into the incision in the right loin, the kidney could be felt, and an incision into its substance, through which the forefinger could be pushed for about an inch. On removing the abdominal viscera, the right kidney was seen in position, lying somewhat loosely in its renal cushion, and greatly enlarged. Colored water injected through the wound distended the peri-renal cellular tissue and oozed simply by force of pressure through the peritoneum into the peritoneal cavity, but there were no evidences whatever of any opening into the peritoneum. Right kidney enormously enlarged, weighing 1 lb. 3 oz., and measuring 9½ in. by 3½ in. The pelvis was extensively dilated and sacculated, its walls considerably hypertrophied, and its lining membrane smooth and shining; with it communicated a considerably dilated and hypertrophied ureter. Lying at the bottom of the lowest sacculus, into which opened the ureter, was a large flattened convex stone, measuring 1¼ in. by 1¼ in., and weighing 288 gr. Besides the large stone, eight smaller ones, brownish in color and all faceted, were found; these weighed together 30 gr. The kidney substance, which was uniformly hypertrophied, looked fairly healthy and normal. All that remained of the left kidney was a small thickened and dilated sac filled with a turbid secretion; at the upper part there were a thin crust of atrophied renal tissue and several small cysts. Intestines: Walls thickened, and somewhat sodden with œdema. The coils were much distended with gas and liquid yellow fæces; the peritoneal coat showed here and there the lines of hyperæmia indicative of early peritonitis. The parietal peritoneum was also hyperæmic in places, especially over the region of the right loin and right abdominal wall. The bladder and rectum were normal. The heart weighed 15 oz. The left ventricular wall was much thicker than normal, and generally hypertrophied. The valves and cavities were normal. The bases of the lungs were somewhat congested and œdematous, the upper lobes were quite normal."

Now, at the time of the operation the tip of my own forefinger and that of my colleague assisting passed into a cavity which was considered by us both to be the pelvis of the kidney, and a probe traveled freely upwards and downwards in this space. As a matter of fact, as you now see, the finger and the probe never reached the pelvis, but were separated from it by its lax hypertrophied lining membrane, and the instrument in its course separated this thickened tissue from the cortex without entering the interior of the organ. If in this particular instance the exploration had taken place through an abdominal incision made at the edge of the rectus muscle, there is little doubt that the stone would have been readily detected and removed; as it was, owing to the great enlargement of the viscus, the sulcus containing the calculi lay sheltered in the upper part of the pelvic cavity, and the incision into the renal substance was more than six inches away from the object of the search. The features of interest in the whole case are so numerous and abnormal that in the present imperfect state of renal surgery they appear worthy of special note.

A few words on those cases in which nephrectomy may be performed. Professor Gross, in an able paper* showing a wide range of research on this subject, says: "From an extensive acquantance with the literature of the subject, I have been long convinced that the kidney has been too frequently removed." This is very probable; and in our zeal to test the efficacy of a new operation for the relief of very painful disorders perhaps a few kidneys have been sacrificed. But now that Professor Gross can present a list of 233 cases, and tabulate the diseases, the operation performed, the number and causes of death, together with, in many instances, the results of post-mortem examinations, I think surgeons are in a position to judge more or less accurately what cases are fitted for the operation and what are unsuitable. The statistics show that the lumbar operation is safer than the abdominal. I would not say that on this account it is *always* to have the preference, as due allowance must be made for the nature of the case and the dexterity of the particular operator; but in the majority of instances it is the best operation. It may be resorted to, *after* nephrotomy and drainage have failed to relieve, (*a*) in suppurative lesions depending upon a local irritant, (*b*) in hydronephrosis, and (*c*) in traumatic rupture of the kidney. The operation is also justifiable (*d*) in cases of painful floating kidney, when the attempt to fix the organ has failed and the symptoms are still urgent (the abdominal method to be preferred); and (*e*) for any very troublesome fistula, either renal or ureteral. Nephrectomy is a very doubtful expedient—in fact, I believe it be contra-indicated in (1) tubercular disease, (2) carcinoma of adults, and (3) sarcoma of children.

Three Hundred Consecutive Cases of Hæmorrhoids Cured by Excision.

Dr. Walter Whitehead thus writes in the *Brit. Med. Jour.:* During the first five years of my professional career, I employed the ligature in the few cases of severe hæmorrhoids that came under my treatment. I operated according to the most approved method of that time, cutting through the skin and mucous membrane, and applying the ligature to the artificially-produced pedicle. The number of cases operated upon did not, perhaps, exceed a dozen; nevertheless, they were sufficient to convince me that the ligature by no means produced a radical cure. One of my patients returned almost as bad as ever, and the reports I heard of another were anything but satisfactory. Although I have rarely made use of the ligature since, I have, during the last fifteen years, frequently operated a second time on patients whose piles had been previously ligatured. In some of these recurrent cases the operation had been performed by men of eminence in this department of surgery, leaving piles so extensive that it has been difficult to believe that they had ever been subjected to a previous operation. Amongst these, one was a case operated upon by Salmon thirty-six years ago.

After abandoning the ligature, I adopted the clamp and cautery, which to the novice appear to have such fascinating advantages. For eight years I treated all my cases in this manner, and I devoted a considerable amount of attention during this time to the construction of an instrument, which I eventually fin-

* American Journal of Medical Science, July, 1885.

ished to my satisfaction, and called a Speculum Clamp. This instrument I now produce; and merely mention it to show that for the time I had a strong prejudice in favor of this method of treatment. My experience of the clamp and cautery, which certainly exceeded fifty cases, resulted eventually in the conviction that it was decidedly inferior to the ligature. The immediate risks I found to be greater, and the failures by recurrence more numerous. Certainly it was more frequently followed by secoudary hæmorrhage, and I am aquainted with cases where the bleeding, which is reported to have taken place, must have been little less alarming after the use of the clamp and cautery than that which occurred in those days when hæmorrhoids were unceremoniously excised, and no precautions whatever taken to arrest hæmorrhage. These cases were operated upon by surgeons of recognized repute in this special method of treating piles. I consider that a plan of treatment which fails to compass that special end for which it was designed, and in addition has other obvious disadvantages, besides the further objection of being somewhat difficult to understand and complex in execution, loses its position in surgery, and must give place to other operations which involve less risk, give better results, and do not require any special surgical training.

Being convinced of the disadvantages and the imperfections of the ligature, and the clamp and cautery, I abandoned both in 1876, and I have never used either of them since.

During the last nine years, with the exception of a few cases treated by thermopuncture, and others by the injection of chemical agents, I have almost exclusively removed hæmorrhoids by excision; and unless I had very ample and sound grounds for advocating the advantages of this plan of treatment, I should have deferred saying anything until such time as much greater experience would have justified the course I am now taking. It has, however, so far exceeded all my expectations, that I have no hesitation in expressing my conviction that it surpasses in every respect every other operation designed for the same purpose. I have now operated upon more than three hundred patients without a death, a single instance of secondary hemorrhage, or one case where any complication, such as ulceration, abscess, stricture, or incontinence of fæces, has occurred. I may go further, and state that I have never had one moment's anxiety about any of the cases, and to the best of my knowledge every patient has been completely and permanently cured.

I am now, with all due diffidence and respect, going to make what may appear a very bold statement. I do not consider that any surgeon has a thorough conception of hæmorrhoids until he has performed the operation of excision. He may have dissected the cadaver any number of times with the special object of studying the structure of hæmorrhoids, but it is only on the living subject that dissection will reveal their true nature. It is these vivisections that have confirmed my belief in the inefficiency of the ligature and the clamp, and they have revealed also the cause of failure. In surgical literature we read of hæmorrhoids as distinct individual tumors, but the vivisections I have referred to demonstrate that the entire plexus of veins surrounding the immediate interior of the gut is invariably at fault. Without doubt the hæmorrhoidal condition is marked by special protuberances at certain points in the circumferece of the gut; and these

I find have a pretty uniform position, owing no doubt to the regular disposition of the fibrous septa.

But the essential fact remains that, though possibly concealed by these masses, there are minute venous radicles behind and between the main tumors. They are now as small as their larger neighbors once were, but let the latter be removed by clamp or ligature, and the apparently insignificant venules will dilate and take their place, the very removal, perhaps, affording room for growth, and whilst taking off external pressure leaving the tension within increased. It is on the removal of these rudimentary piles, that the permanence of the cure and the future welfare of the patient depend; and I contend that the operation of excision alone satisfactorily accomplishes this object.

The principles of the operation are exceedingly simple, and its performance requires no special apprenticeship. I have received numerous letters from provincial practitioners, who had only read the original description I gave in the *British Medical Journal* for February, 1882, expressing their entire satisfaction with the operation. As I have since slightly modified the operation, I will first briefly describe it, and afterwards discuss in more detail some of the stages which, perhaps, require further explanation and some vindication at my hands, as the operation is opposed to some of the most cherished practices of modern surgery.

1. The patient, previously prepared for the operation and under the complete influence of an anæsthetic, is placed on a high narrow table in the lithotomy position, and maintained in this position either by a couple of assistants or by Clover's crutch.

2. The sphincters are thoroughly paralyzed by digital stretching, so that they have no "grip," and permit the hæmorrhoids and any prolapse there may be to descend without the slightest impediment.

3. By the use of scissors and dissecting forceps, the mucous membrane is divided at its junction with the skin round the entire circumference of the bowel, every irregularity of the skin being carefully followed.

4. The external and the commencement of the internal sphincter are then exposed by a rapid dissection, and the mucous membrane and attached hæmorrhoids, thus separated from the submucous bed on which they rested, are pulled bodily down, any undivided points of resistance being snipped across, and the hæmorrhoids brought below the margin of the skin.

5. The mucous membrane above the hæmorrhoids is now divided transversely in successive stages, and the free margin of the severed membrane above is attached, as soon as divided, to the free margin of the skin below, by a suitable number of sutures. The complete ring of pile-bearing mucous membrane is thus removed.

Bleeding vessels throughout the operation are twisted on division. This brief description comprises the several stages of the operation.

1. In the first place it will be observed that beyond the chloroformist the operation requires no skilled assistance. A single nurse is quite sufficient, and I have on more than one occasion dispensed with assistance altogether.

Contrary to general recommendation, I prefer the lithotomy position, with the legs well flexed on the thighs, and the thighs on the body. This raises the whole pelvis, and gives the surgeon a commanding view of the field of operations. I sit in front of my patient, with my work on a level with my shoulders.

2. I have a strong objection to the use of instruments in the dilatation of the sphincters. Not only are they apt to produce sloughing, which would jeopardize the success of the final step in the operation, but the danger of rupture and possible future incontinence is also greater, for the resistance can only be very imperfectly estimated, and the pressure cannot be regulated with delicacy, and is moreover unequally applied; I therefore invariably employ digital stretching. With the fingers the pressure can and ought to be distributed all round the circumference of the bowel, so that the muscles are uniformly stretched and not torn. If the sphincters be firm I generally introduce my two first fingers or thumbs, and knead the muscles all round, but if the parts are more relaxed, I at once collect the fingers in the form of a cone, and gradually pass in as much of the hand as is necessary. If ordinary prudence is exercised, the sphincters will invariably be restored to the full exercise of their natural function within three weeks.

3. It is better to commence the separation of the mucous membrane from the skin at the lowest point and deal with the two sides in succession, before completing the circle above, so that any oozing that may occur shall be below the work as it proceeds. The incisions must be made through the mucous membrane and not through the skin. It is very important that no skin should be sacrificed, however redundant it may appear to be, as the little tags of superfluous skin soon contract, and eventually cause no further inconvenience. If this precaution be taken there is no fear of stricture, which, as Treves has shown, is much less common even after elimination of a complete segment of gangrenous bowel than was once imagined.

The attachment of the mucous membrane and piles to the sphincters is so slight that I either employ the closed scissors as a raspatory or use my fingers in their separation. The firmest adhesions are always found at the highest and lowest points where the fibres of the external sphincters converge. With a very little patience the whole of the hæmorrhoidal plexus can be isolated and the membrane drawn down, leaving the external sphincter almost bare and cleanly dissected. Up to this stage of the operation there is practically no hæmorrhage, for, as is well known, the arteries which supply the rectum run immediately beneath the mucous lining, and not in the loose tissue separating it from the sphincters. They are, however, necessarily cut in the next step, which consists in the transverse division of the mucous membrane just above the piles. To prevent hæmorrhage it is advisable to cut through the bowel by degrees and to twist each bleeding vessel as it is divided. After securing the vessels, before making any further incision in the bowel, I attach the free edge of the piece of mucous membrane first divided to the corresponding portion of skin at the verge of the anus. This procedure is repeated until the entire circumference of the bowel is secured to the skin. By this means I almost invariably secure healing by first intention.

The arteries met with are exceedingly small, easily seized, and only require a few twists of the forci-pressure forceps to prevent both immediate and secondary hæmorrhage. Ligatures may slip off, be torn off by the first action of the bowels, or ulcerate through before the vessel is occluded, but torsion never fails.

I have often operated on severe cases and not found it necessary to twist a

single vessel, and very frequently only one or two. The rectum and four inches of the bowel can be excised as I have excised it, without securing a single vessel, and I have proved that 300 operations for the radical removal of piles can be effected without a single instance of secondary hæmorrhage; consequently I consider that special instruments and extraordinary precautions may be finally dismissed, and the excision of hæmorrhoids once more be admitted within the pale of general surgery.

I do not make use of any sponges during the operation, as I very much prefer little squares of lint wrung out in hot spirit and water.

Before closing the wound I insufflate iodoform between the raw surfaces, as I find it checks any tendency to sanguineous oozing, and facilitates primary union. For the purpose of suturing the mucous membrane to the skin, I always employ carbolized silk, and I never take out the stitches, as I find they come away of themselves without creating the needless alarm to the patient which their removal generally occasions. Indeed, after the operation, there is no real necessity ever to look at or touch the parts again.

Whilst the patient is still on the table, I introduce into the rectum a suppository containing two grains of extract of belladonna, give the external parts a final dust with iodoform, and place over all a strip of oiled lint, which is retained in position by a T-bandage.

For the first few days, with highly neurotic patients, I keep a bag of ice in close proximity to the rectum, and I generally recommend a dose of castor-oil to be taken on an empty stomach on the morning of the fourth day. The patient sits up on the fourth day, and is in a condition to resume work within a fortnight.

I rarely find that the patient suffers much pain after the operation, though this depends chiefly on the nervous susceptibility of the individual. Some aching in the back may be complained of, as in other pelvic operations, but this is generally relieved by change of posture. If the change of posture does not answer, a hot water-bag or hot salt applied to the back will generally give immediate relief.

Retention of urine occasionally follows, and sometimes I have found it desirable to use a catheter; but, as a rule, I direct the patient to pass water on his hands and knees, and after a little patience he succeeds. I have never but once known the use of the catheter absolutely and urgently required, and that was in a case in charge of another medical man, who confessed that he had prematurely attempted to pass an instrument and failed, and admitted that the retention was more due to his clumsiness than to the real necessities of the patient. I am of opinion that this complication is met with less frequently after excision than after any of the other operations which aim at the same result.

Such, gentlemen, is the operation I wish to advocate for the removal of hæmorrhoids by excision, or I might rather say, for the removal of the hæmorrhoidal area by excision; and I claim:

1. That it is the most natural method, and in perfect harmony with the most approved principles of surgery.

In illustration of the inconsistencies that have from time to time been introduced to support special departures from the ordinary practice of general surgery on this subject, I will quote the arguments which have recently appeared from the pen of a distinguished surgeon. In the *Brit. Med. Jour.* for 1882, he

states, with reference to the ancient plan of excision of the mamma: "The breast was laid hold of with great pincers, and having been cut clean off, the surface was rubbed over with a red-hot poker. Against a proceeding so shocking to the age, modern taste revolted." And yet this distinguished surgeon writes in 1884: "There have been three great strides in the surgery of the rectum, and one of them is the treatment of hæmorrhoids by the clamp and cautery." Now, I ask, what does the clamp-and-cautery treatment imply if it does not mean that the tumor is laid hold of by pincers, and having been cut off, the surface is rubbed with a red-hot poker. The rectum has its rights, I consider, as well as the breast, and I therefore claim for it the privileges of modern surgery. Curiously, the same author, in 1886, takes exception to the scientific construction of the clamp now almost universally employed.

2. Excision, in addition to its simplicity, requires no instrument which is not found in every practitioner's pocket case.

3. It is a radical cure. It removes the peculiar pile-area, and I believe recurrence to be impossible.

4. Though no operation is absolutely devoid of risk, I consider that excision in this respect is at least on a par with the safest method yet recommended for the removal of piles.

5. The pain after excision is slight in amount, of short duration, and, I believe, less severe than follows any of the other operations.

6. The loss of blood at the time of operation is so small as hardly to merit notice; though perhaps in this respect it must give precedence to the ligature and clamp; but, so far as secondary hœmorrage is concerned, the risks are unquestionably less.

In conclusion, allow me to recapitulate briefly what my contention is. I contend that the internal hæmorrhoids, which are generally regarded as localized distinct tumors, amenable to individual treatment, are, as a matter of fact, component parts of a diseased condition of the entire plexus of veins associated with the superior hæmorrhoidal, each radicle being similarly, if not equally, affected by an initial cause, constitutional or mechanical.

I am of opinion that, when surgical treatment becomes imperative, the extent of the mischief can only be appreciated and effectively dealt with by a free exposure of the diseased vessels, and that no procedure fulfils this purpose short of a deliberate dissection of the lower rectal area.

And, finally, I consider that any operation, which has for its object the removal of hæmorrhoids, is not complete which does not provide for the readjustment of the healthy tissues, with the object of securing primary union and rapid convalescence.

The dread of hæmorrhage in excision of hæmorrhoids, is a delusion which has been fostered and sustained by potential authorities who have, I consider, for the last thirty years, indulged in unjustifiable departures from the sound principles of general surgery.

QUARTERLY COMPENDIUM

—OF—

MEDICAL SCIENCE:

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SYNOPSIS

—OF—

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I. ANATOMY, PHYSIOLOGY AND PATHOLOGY.

Peculiar Form of Irregularity in the Motions of the Pupil.

Beside the well known irregularities in the movements of the pupil, SALGO observed, especially in patients suffering from paralytic affections of the mind, motor disturbances, which consisted in irregular contractions of the muscles of the iris; the pupillary margin of the iris appears distorted in these cases. The pupils are not reflexly immovable, but change their form with every reaction. Salgo found the pupils thus affected in cases of progressive paralysis, but occasionally in chronic functional psychoses.—*Centralblatt fur die Medicinischen Wissenschaften, No. 19, 19th May, 1887.*

Experiments on the effects of blood transfusions in decapitated animals.—Compt. Rend. CIV., No. 6.

G. HAYEM and G. BARRIER find that the head (of a dog) when separated from the body very soon, perhaps instantaneously, loses its consciousness. The corneal reflex always disappears before the last facial respiratory movement. Consciousness may be sustained, if immediately after decapitation blood be injected into the vessels of the head. If this be done a few moments after cessation of the functions, involuntary motion and reflex action may return, but not an activity of the organs of sense and of the will, whose existence depends upon the uninjured state of very delicate structures.—*Centrablatt für die Medicinischen Wissenschaften, No. 16, April 16, 1887.*

Further Contribution to the Regeneration and Reconstruction of the Lymph-glands.

Continuing earlier studies, Dr. BEYER, of Prague, arrives at the conclusion that in all cases of disease of the lymphatic glands, resulting in their change of route, he succeeded in finding neoplasms in the neighboring fatty tissues, consequent upon the dialation and thrombosis of the lymphatic vessels. Collections of round cells showed themselves in all stages, from incoördinate masses to regularly formed glands with blood-vessels, stroma and sinus. At the same time there was diffuse proliferation in the fatty tissues, new formation of vessels, and mitoses. Sometimes the neoplastic process was contemporaneous with ulcerative infection from the primary tumor, so that the new lymph-glands were to be distinguished from small metastases of cancers, etc., only when formations already freed of the capsule appeared. —*Schmidt's Jahrbücher, No. 214.*

The Pathological Anatomy of Ozaena Simplex.

Dr. HABERMANN has added two new cases of ozaena simplex to the meagre reports already existing. Both patients showed different stages of the diseased

process in the inferior and middle turbinated bones. The commencement is characterized by the fatty degeneration of the glands of Bowman which are usually of small size. The filling of the acini with sebaceous particles was observed, combined with swelling and coloration of the epithelial cells. While the epithelium is thus being gradually destroyed, the mucous, sub-mucous, periosteal and bony tissues are successively changed by the inflammatory process. Increase of spindle-shaped cells, round-cell infiltration, with fatty degeneration even to the formation of globular masses, and hemorrhages, are likewise noticed, ending with cicatricial thickening, the cicatrices lying plainly in view. The author could find no micro-organisms or other possible sources of trouble. The characteristic fatty glandular degeneration was not found in other nasal affections, and the preliminary stage of rhinitis hypertrophica was also missed in ozaena.—*Schmidt's Jahrbücher, No. 214.*

Microbes and Suppuration.

A. ZUCKERMANN (*Centralbl. f. Bacteriologie u. Parasitenkunde*, No. 17,) relates his experiments upon suppuration, which have led him to these conclusions: That no chemical, mechanical, or thermic influences can excite suppuration in tissues wholly free from microbes; and in cases where these causes apparently act, it is probably through some pyogenic microbe. For substances chemically pure may be mycotically impure; thus some disinfectants are not always free from microbes. The varieties of microbe known to cause suppuration are staphylococcus pyogenes aureus, albus, and citreus; streptococcus pyogenes; and in fœtid abscesses, bacillus pyogenes fœtidus. Inoculations with staphylococcus and streptococcus produce fatal results if injected in large amount into animals, or lead to suppuration if death do not occur. The pyogenic microbes must have a very general distribution in nature; they may enter the body through the air-passages, the intestinal canal, and especially the skin, and by means of small wounds or the orifices of the cutaneous glands. Staphylococcus is more frequent than the streptococcus pyogenes.

Virulence of Tuberculous Sputum.

P. DE GOMA reports the result of continuous studies as to the virulence of tuberculous sputum. Whereas the experiments previously reported (see Allg. Med. Central-Zeitung, No. 79, 1886), were designed to ascertain the specific virulence of the sputum in a dry state, the object of the present experiments was to ascertain how long the moist phthisical sputum retained its power of specific infectiousness. In relation to this the author has ascertained the following points:

1. When in free contact with the air, the sputum may retain its virulence from three to eight days; the more favorable the conditions by decomposition, the quicker its virulence is exhausted. The abolition of the virulence by decomposition does not take place suddenly but gradually.

2. When kept hermetically sealed in a sterilized vessel at 68° F., the virulence only begins to disappear on the tenth or eleventh day. According to the greater or less addition of decomposable substances (from the cavity of the mouth), the above term may be reduced to five or six days.

To these statements the author adds that if the sputum containing bacilli, con-

tains great quantities of bacterium termo or of saliva, deadly septical processes check or interrupt the development of tuberculosis in the inoculated animals.—*Allgemeine Medicinische Central-Zeitung, No. 37, May 7th, 1887.*

Tubercle in the Cow.

The Lancet, May 14th, 1887, says: The cow-keepers and farmers of Hull have had their attention drawn to the dangers of tuberculosis among their cattle by Dr. J. W. MASON, medical officer of health, who delivered an interesting lecture on the subject at a meeting of dairymen last week. Dr. MASON urged upon them the importance of slaughtering all animals affected with this disease, and stated that while in the early stage the meat could be eaten, in the later it was only fit to be destroyed. He discussed the risks to milk-drinkers, and pointed out that Hull received 40,000 pints of milk per day from cows living in the town, and an equal amount from cows outside, over which the corporation had no authority, and he supported the view of Dr. Hime and the Bradford Corporation that authorities ought to be able to exercise control over neighboring areas supplying the town population with milk. Members of the Association who joined in the discussion expressed their desire for legislation which would enable infected animals to be seized and slaughtered, and would add tuberculosis to the list of diseases dealt with under the Contagious Diseases (Animals) Act. The subject is obviously one of great importance, for although there is much reason for thinking that human and bovine tubercle are not identical, Dr. Creighton has adduced considerable evidence to show that man may suffer from the bovine variety. Certainly the milk of tuberculous cows ought not to be sold, and the only safe course is to slaughter all animals infected with the malady.

The Ocular Movements from Irritation of Different Parts of the Brain.

In continuing the investigations of Fritsch, Hitzig, Ferrier, Schwann and others concerning the movements of the eyes following irritation of the various portions of the brain, Professor KNOLL proceeded by excision of parts and by electrical stimulation only. The mechanical stimulus was decisive of the question as to a specific part of the brain. Even when the animal was given strychnine or morphine, the induced current applied to the cerebrum always produced ocular movements. Weak currents were sufficient when this simple mechanical irritation was active; in the opposite case stronger currents were required. The movements were generally of both eyes, and symmetrical. Stimulation of the left hemisphere usually produced movement of the right eye toward the forehead or temple, and of the left eye toward the jaw or nose. Stimulation of the right hemisphere resulted in opposite movements of both eyes. Irritation of the cerebellum was also invariably followed by occular movements, and commonly of both eyes. Electrical irritation of the vermiform process was followed by slow, nystagmus-like movements. Both mechanical and electrical stimulation of the corpora quadrigemina produced movements, though Adamik's conclusions were not confirmed, that there were precise and constant relations between the stimuli, the location of the point to which the same was applied, and the character of the resultant movements of the eyes.—*Schmidt's Jahrbücher, No. 214.*

The Action of the Ureters in the Human Subject.

In the *Ejenedelnaia Klinitches Kaia Gazeta*, No. 1, 1887, p. 13, Dr. A. J. ZAMSHIN, of St. Petersburg, describes an interesting case. The patient was a Finnish woman, aged 42, who was admitted under the care of Professor A. J. Lebedeff with an extensive recto-vesico-vaginal fistula, and in whom he was enabled to make direct observations on the fully exposed vesical orifices of both ureters. Dr. Zamshin made nine observations, each lasting nearly an hour, and the results may be given as follows: 1. In man, as in animals, the contractions of the ureters have a peristaltic character. 2. Contractions of both orifices do not coincide in time. Synchronous contractions on both sides were seen by the observer only very rarely. Of forty-seven contractions of the right and ninety-seven of the left ureter during five sittings, only three occurred simultaneously. 3. The number of contractions in the same ureter in the same period varied at various times; during a period of ten minutes, the right ureter, on four different occasions, underwent 12, 10, 4 and 7 contractions. 4. The quantity of urine discharged by the ureter at one contraction, as well as that expelled during a given period, varied on different occasions. 5. The quantity of urine discharged at a single contraction of the ureter varied, as a rule, from 0.8 to 2 cubic centimetres, the greatest quantity being 4 cubic centimetres. 6. No increase in the frequency of the contractions could be produced by an increased supply of drink. 7. Analysis showed that 10 cubic centimetres of the urine from the right ureter contained 95 milligrammes of urea and 68 milligrammes of chlorides, the corresponding figures for the left ureter being 85 and 65.—*British Med. Journal, June 4, 1887.*

Orchitis Variolosa.

This disease, orchitis occurring in variola, so little considered up to now, was observed by Professor CHIARI, of Prague, in 15 boys, and proved to exist, regularly, in a corresponding stage of the affection. "The testes, from the fourth day, showed numerous small scattered nodules, at first of a gray translucency, later becoming larger and yellowish, and peculiarly rigid. The microscope showed that these nodular masses proceeded from the interconnective tissue in which was formed the exudate and round-cell infiltration with quick destruction of the enclosed elements, and later, even of the spermatic capillaries. The older the collection, the sharper was the differentiation into three layers: Central necrosis with round cell infiltration about the same, extensive exudation outward, the proliferation and beginning necrosis of cells, with gradual transition into sound tissue. As to the cause, cocci were found in only two cases, which as regards their size and arrangement corresponded exactly with the micro-organisms mentioned by various authors as existing in small-pox."

The author considers this affection as the analogue of the efflorescence of variola, both on account of the time of its appearance and of its histological character. Weigert has shown that the distinguishing characteristic of variola, both as regards the skin and other internal organs, consists essentially in a primary necrosis of the connective tissue cells with secondary round-cell infiltration. The process in the testicles is distinguished from that described by Weigert as taking place in other internal organs only by its longer continuance and more pronounced devlopement.

Concerning the especial predilection of the affection for the testicle, the author points to the frequency of syphilis of the testicle, of leprosy and tuberculosis (bacilli in the testis in chronic tuberculosis of the lungs) of the same. In his cases, with the exception of the mouth, œsophagus, and trachea, there was, in the other internal organs, no specific disease to be found. The question arises whether the conditions observed by the author in the boys would correspond completely to those of adults.—(*Schmidt's Jahrbücher, No. 214.*)

Investigations Concerning the Relations of Muriatic Acid and the Gastric Juice at Different Periods of the Digestive Process, etc.—Thesis Strassburg.

L. Rothschild in experimenting upon himself and upon a patient normal as to his digestive functions, adopted the following plan:

After introducing with a probe into the empty stomach 50 grms. carne pura and 325 grms. of water, the contents of the stomach, after the lapse of a definite time, was removed by a stomach-pump and the degree of acidity ascertained by titration. As the author had satisfied himself that the only acid of the stomach's contents under these circumstances is muriatic acid, the acidity is directly referable to HCl. The following results were obtained, stated in parts of HCl *per thousand:*

	Subject I.	Subject II.
	p. m.	p. m.
After ½ hour	0.74	0.74
After 1 hour	0.82	1.64
After 1½ hours	0.99	1.86
After 2 hours	1.40	2.88
After 2½ hours	2.46	2.22
After 3 hours	Stomach empty.	Stomach empty.

Accordingly the quantity of muriatic acid and the progress of secretion show great differences in the two persons experimented upon, but they also have much in common.

Considerably greater values were obtained with exactly the same conditions of experimenting, in persons suffering from ulcus ventriculi, viz.: One hour after introducing 50 grms. of carne pura, there was observed in Patient I., 2.47 p. m.; Patient II., 2.26 to 3.25 p. m.; Patient III., 2.2 to 2.86 p. m. Thus the observations made by Von Mering and Cahn are confirmed, and an important new factor in the diagnosis of the ulcus rotundum is obtained.—*Centralblatt für die Medicinschen Wissenschaften, No. 18, 30th April, 1887.*

On the Closure of the Human Stomach at the Cardia.

A. v. Gubaroff. Some years ago Braune made the statement that large quantities of water could be forced into the stomach through the œsophagus, which though no ligature existed in the œsophagus, would not flow back. It was therefore natural to anticipate the existence of valvular action. Gubaroff, in order to investigate the mode of this action more closely examined, the course of the

muscular fibres in the region of the œsophageal opening, and then experimentally tested the closure of the stomach at the cardia. The preparation exhibited the following conditions: Two powerful sets of muscular fibres, having their origin in the third lumbar vertebra, and extending to the centrum tendineum, form a slit-like opening, through whose upper portion the œsophagus passes, while the aorta passes through its lower portion. The two passages are separated from each other by a tendinous stripe which passes between the œsophagus and the aorta. Muscular fibres rise from this tendinous stripe, which, running from right to left, surrounds the œsophageal foramen, and even sends out circular fibres to the right, which also surround the œsophageal foramen. We have here then the formation of a complete sphincter; this is more plainly visible when the preparation is viewed from the back, that is to say, from the cavity of the pleura. However the existence of these sphincter muscles are not alone sufficient satisfactorily to explain the closure of the cardia; an additional valve action is required, based upon the œsophagus obliquely entering the stomach.

If we examine this insertion in sections of hardened preparations, we find that the position of the inosculation is beneath the fundus of the stomach, and that by a copious filling of the stomach the left margin of the cardia becomes lip-shaped, and is forced over the œsophageal opening so as to produce a valve-like closure of the same. The correctness of this anatomical view is proven by experiment. The thorax was removed above the diaphragm, and a large quantity of fluid injected into the for some distance exposed œsophagus; each time a complete closure of the cardia was observed which gradually became insufficient only when the quantity of injected water became too large. Then, after exposure of the flexura duodenojejunalis, a fluid was introduced from below into the stomach through an incision in the abdominal wall; under these conditions an absolutely tight closure of the stomach to where the œsophagus was observed, so long as weak pressure was used. It may also be remarked, that this closure is much weaker in bodies of children, a circumstance attributable to the more vertical incertion of the œsophagus into the stomach.—*Schmidt's Jahrbücher der Gesammten Medicin, 1887.*

Growth of Pathogenic Organisms in Water.

In the issue of *The Polyclinic* for September, 1886, a brief note was published on some recent observations, notably those of Dr. Leone, on the rate of growth of microbes in potable water. For some years it has been plainly evident that it is in this direction that we must look for the development of a sound system of water analysis. We must practically abandon the idea that the dead "organic matter" is the cause of disease, and with such abandonment will go the importance of the "ammonia" and "permanganate" methods which have so long been the laboratory favorites. As yet we are not sufficiently familiar with forms of bacteria, or at least, such accurate knowledge is possessed by so few persons, that the different species present in any given sample of water cannot be easily determined. The processes, however, for studying the development of bacterial life are so accurate that in the hands of a few observers, very valuable and interesting results have already been attained.

One practical problem is, how long will bacteria of known pathogenic powers

retain their vitality in potable water? Several important communications on this topic, from trustworthy sources, have lately appeared. In the *Zeitschrift f. Hygiene*, Meade Bolton discusses the subject, and also Dr. Percy Frankland in the *Sanitary Record*, and Dr. Kraus in the *Archiv f. Hygiene*. The conclusions, as might be expected, do not quite agree. Frankland has shown beyond doubt the great benefit to be derived from filtration, and his later results show that sporeless bacilli are little likely to multiply in water, but that different species of microbes behave very differently—in other words, no general law can yet be laid down. Kraus's observations appear to be very valuable from a practical point of view. He premises very plausibly that experiments made upon sterilized water, or on samples maintained at blood heat, have but little practical bearing, and that the sample should be in the normal condition. Kraus inoculated samples of river and pump water with well known species of pathogenic bacteria, and noted the growth under ordinary conditions. He found that the number of the pathogenic organisms soon began to be reduced, while the non-pathogenic varieties already present in the water increased. At the end of a few days no living pathogenic organisms could be found. This result does not seem strange. Among rapidly multiplying organisms the struggle for existence must be an important factor, and in the average water the microbes normal to it will be likely to be the victors in any such struggle. Something will, of course, depend on the supporting power of the water, and in the relation the amount of the organic matter may retain some significance. Frankland states that while Koch's comma-spirillum multiplies enormously in sewage, it does not in filtered well water; and Finkler's spirillum, which closely resembles Koch's, could not be made to live a single day in either sewage or filtered water. In this connection may be noted the remarks made by Dr. Buchanan, in the report of the London Local Government Board, to the effect that perhaps the surest protection against pathogenic bacteria will be the agency of the non-pathogenic forms.

These questions are evidently growing in interest and importance daily, and sanitarians will be obliged to keep themselves prepared for any new views.—*The Polyclinic, May, 1887.*

The Physiological Connection Between the Heart and the Lungs.

Prof. Ernst von Fleischl, the well-known Vienna physiologist, has recently put forward an ingenious view concerning the influence of the heart-beat on the respiratory changes in the lungs. His theory is based on a very interesting, but hitherto unknown, physical phenomenon he had occasionally observed. If a liquid containing an absorbed gas be exposed to negative pressure—to a vacuum—only a small quantity of the gas absorbed can be extracted, ascending in visible bubbles through the liquid; but if the liquid had been shaken by a single blow or impact just before commencing the exhaustion process, nearly the whole of the gas absorbed is rapidly set free, the liquid assuming a froth-like appear ance. The quantity of gas thus exhausted is one hundred times larger than that withdrawn without impact. This action of the impact on solutions of gases in liquids is apparenty somewhat analogous to the well-known phenomenon of rapid solidification of water cooled below the freezing point, or of instantaneous

crystallization of hot saturated and then slowly cooled solutions of Glauber's salt, also initiated by a sudden impact. At a recent meeting of the Vienna Society of Physicians opportunity was given to see some of Professor von Fleischl's experiments, which can easily be repeated by means of a hypodermic syringe furnished with a stop-cock. By a slow upstroke of the piston the lower portion of the syringe is filled carefully with water which has been exposed to the air for a short time; the orifice is then closed by turning the stop-cock. The piston is now drawn upwards as far as possible, and then released slowly and cautiously until it touches the water again. By this exhausting action some gas bubbles are formed, which are to be expelled by opening for a moment the orifice and inverting the syringe. Then the liquid is shaken by a single blow exerted against the piston, or by releasing it suddenly. If a short time (half a minute) after the concussion of the liquid the piston is drawn upwards again as far as possible, the previously clear liquid becomes rapidly white, like an effervescent mixture, by the froth formed by the sudden and copious escape of the gas. In explanation of this phenomenon, Professor von Fleischl suggests that by the impact the physical connection of the molecules of the gas and of the liquid is altered, and the real solution of the gas in the liquid is transformed into what he calls a "molecular mixture," wherein the gas molecules, previously closely connected with the molecules of the liquid, are lying free in the interspaces between the molecules of the liquid, from which they can easily be withdrawn if the liquid is exposed a short time after the impact to a vacuum or to the process of diffusion. Now, the blood is also a liquid containing absorbed gases. The entrance of oxygen can be easily explained by the properties of the colored blood-corpuscles, but the exit of carbonic acid has till now received no elucidation, for the rate of pressure of alveolar air is not sufficient to secure the diffusion of the gas from the blood serum wherein it is dissolved into the air. The professor assumes that the diffusion of the carbonic acid of the venous blood into the air of the alveoli is only made possible by the action of the impact imparted to the blood in the pulmonary artery by the systolic contraction of the right ventricle of the heart. By this impact the physical condition of the blood entering the alveolar capillaries of the lung is changed, the solution of carbonic acid in the serum being converted into a "molecular mixture" from which the gaseous carbonic acid can diffuse freely through the alveolar walls into the air. He believes also that cyanosis is due to a weak action of the heart muscle, which cannot impart to the blood an impact sufficient for preparing it for diffusional exchange, so that its carbonic acid cannot be fully discharged. This view of the action of the heart on the respiratory changes seem also to be supported by facts of comparative anatomy.

The Parasitic Nature of Malignant Tumors.

At a meeting of the Pathological Society of London, May 17, 1887, Mr. BALLANCE and Mr. SHATTOCK exhibited the results of a series of cultivation experiments made with new growths. The authors were led to experiment with malignant new growths in this direction, since they were persuaded that the essential pathology of these must (as so greatly insisted upon by Sir James Paget) be similar to that of the specific diseases. Pieces of carcinomata of the breast removed immediately after operation and transferred to tubes of solidified serum,

agar-agar, and Koch's beef peptone gelatine, were incubated at 100° F. for various periods—in one case for thirty-three days. The authors compared the pathology of cancer with that of tubercle, and considered that cancer, like tubercle, might be either a purely local disease, or the local manifestation of a "diathesis," comparable to that of the "scrofulous," the localization in either case depending upon a specific organism. The geographical distribution of cancer was also noticed as an argument in favor of its parastic nature. They met the chief objection urged against the parasitic theory, viz, that in a case of columnar-celled carcinoma of the rectum the secondary tumors in the liver resembled in structure the crypts of the intestine—by observing that in the normal process of development it is the epithelium that determines the anatomical character of glandular formation, the arrangement of vessels and connective tissue being a secondary adaption to this; and they conjectured that in a similar manner a cell transported to another organ would by its determinate hereditary tendency produce a structure similar to that of which it primarily formed a part, the organ itself furnishing the vessels and supporting tissue of the new epithelial formation. They further remarked that the view of the parasitic nature of cancer afforded a possible explanation of the cachexia, which is at times not to be wholly accounted for on general principles, since all pathogenic organisms give rise, as a result of their activity, to deleterious chemical products, and these passing continually into the general circulation from the substance of the tumor would exert an unfavorable influence on the general health. The alleged antagonism of cancer and tubercle might be explained on the well-known grounds of the interference in growth which certain organisms exercise upon others. They concluded from their experiments that the parasite of cancer must be unlike, in its life-history, those already known, in that it does not admit of cultivation in any of the ordinary media. They commented upon the supposition that the parasite was one of the protozoa, and thought that the physiology of certain of the naked protozoa afforded much interesting material for speculation upon the physiology of cancer; the sporulation of protozoa and the rejuvenescence by fusion were referred to as offering possible modes of explaining the infection of the epithelium, the abnormal growth and extension of which constituted the characteristics of carcinoma. Having found that new growths were sterile under the conditions of the experiments, the authors experimented in a similar way with healthy tissues, with the result that they were able to maintain sterile at 100° F. portions of testicle, submaxillary gland, kidney, muscle and liver. In regard to the liver, they were not prepared to state that the same holds good, since in most cases the portions experimented with did not remain sterile. These results accord with Mr. Watson Cheyne's previous work, reported in the Society's Transactions for 1879.

In the discussion which followed, Dr. Coupland said that the late Dr. Grant believed that white corpuscles of the blood were forms of the lowest protozoa.

Mr. F. S. Eve gave arguments against the parasitic theory. He had repeated Leopold's experiment and transplanted portions of epitheliomata of the tongue into the anterior chamber of the eye of the rabbit, and acute suppuration followed, altnough it was known that this chamber was very tolerant of living tissues.

Mr. Roger Williams also combated the parasitic theory.

Mr. Felix Semon referred to the antagonism alleged to exist between tubercle and epithelioma. He had seen the two forms together in the larynx.

Sir James Paget said that he had known cancer almost decay and shrivel up during the rapid development of tubercle, and *vice versa;* neither lived in full force together. He felt that he must have made a happy guess in early life, and he thought that very likely the parasitic theory would be found to give an explanation of the great difference between innocent and malignant growths.—*The Lancet.*

On the Struggle of Cells Against Erysipelas: A Contribution to the Study of Phagocytes.

Dr. E. V. METSCHNIKOFF, (*Virchow's Arch. CVII., 2. p. 209, 1887.*) The investigations on the struggle of cells with micro-organisms that have entered them, which Metschnikoff made in the first place in a fungous disease occurring in the minute aquatic organism known as daphne, later in anthrax of frogs, are extended to human pathology in the work before us. Metschnikoff is of the opinion that such studies in men can only be undertaken under specially favorable conditions. The disease should be a curable one, and its cause one whose properties are well known to us, and which is at the same time well characterized. Relapsing typhoid seemed to him well fitted for this purpose. Lack of material, however, forced him for the present to give up the investigation of this disease. Metschnikoff therefore directed his attention to erysipelas.

Upon examination of two fatal cases of erysipelas, the cocci were found free in the tissues, but never inclosed in cells. However, on the other hand, the existence of cells containing bacteria could be demonstrated in a large number of convalescent cases. They occurred in greatest numbers within reach of the inflammatory infiltration, which was much more pronounced in these cases than in the fatal ones. All transitions from fresh forms capable of life to those consisting of a mere grain-like detritus could be observed in the inclosed bacteria. The bacteria-destroying cells were leucocytes, but this property can by no means be proven for all leucocytes—it seemed rather to be only a small number of the white corpuscles which were phagocytes. Metschnikoff called these cells microphagi, and opposes them to macrophagi, which he considers as originating from connective tissue cells. He considers them to be the large cells with vesicular nucleus which occur as epitheloid or fibroplastic cells in every inflammation, and the giant cells which are found especially pronounced in tuberculosis. These macrophagi can under certain conditions directly absorb and destroy bacteria. Erysipelas cocci, however, were never found in them. In this disease it would seem that the microphagi alone take part in rendering harmless micro-organisms which may have entered. On the other hand, there were frequently found the remains of complete but dead leucocytes. This property of the microphagi to take up dead cells seems to be of importance in the absorption of the inflammatory exudate, and the rapid return to the normal, as they are especially observed in erysipelas. Metschnikoff always considers the inflammation as a reactionary phenomenon when compared with the entering of microbes, or, as he terms it, "phagocytosis."

The accumulation of phagocytes he alone considers characteristic of the same.

If Cohnheim says "No inflammation without vessels," Metschnikoff would alter the statement, and say no inflammation without phagocytes. For even in the lower animals in which the vascular system is wanting, the only reaction resulting from inflammatory irritation is an accumulation of phagocytes.

Interesting and remarkable as are the investigations of Metschnikoff, he will meet with much opposition to his views, more especially to that concerning inflammation. If inflammation is to be considered as nothing but phagocytosis, and one believes thereby to have accounted for all its phenomena, we can but say that it is at the furthest only true for the infectious form of inflammation. The, in the main, identical processes which take place in the plastic inflammation, in which bacteria are not concerned, and whose existence cannot be denied, cannot be considered.

Further, as to the enclosure of bacteria in cells, it is by no means true that in all cases this inclosure is equivalent to rendering harmless, though this may frequently be the case. Thus, for example, the fact that the giant cell is the grave of the tubercle bacillus is much in favor of this theory.

On the other hand, in many cases the cells seem to be the only cultures in which the bacteria producing the particular disease flourish. Examples of this are mouse septicæmia, gonorrhœa, etc., in which the bacteria are always found inclosed in cells, without their having lost any of their virulence. We are no doubt far from being able to explain by simple chemical or mechanical means those complicated processes which transpire in the organism during the destructive materies morbi which may have entered it. On the contrary, it cannot be too strongly emphasized that a premature experiment of this kind might, under conditions, be a great hindrance to the further advance of the science.—*Schmidt's Jahrbücher der gesammten Medicin. Jahrgang, 1877, No. 5.*

Behavior of Fluid in the Chest.

At a meeting of the South-Eastern Branch of the British Medical Association, Dr James F. Goodhart, physician to Guy's Hospital, said:

The subject of my paper this afternoon is empyema, and the behavior of fluid in the chest. It is an interesting and a large one, and treated—as I shall necessarily have to treat it—in a somewhat cursory manner, many points must remain untouched. And, first of all, it occurs to me to say—although I must not dwell upon so speculative a matter—how interesting, and withal important, a question is the process of pouring out of fluid. How comes it that fluid is so rapidly effused, and sometimes as rapidly absorbed? Where lies the difference between the latter case and those where week after week goes by before the natural conditions are replaced?

It seems to me that incomplete knowledge and inefficient treatment have resulted from the too precise statements made in text-books. For example, in any case of pleurisy we expect the dulness, absence of respiration, of tactile vibration, etc., at the base of the lung; and we draw a line round the chest at the particular spot, and say there is the water-line; and we watch it, as we suppose, in the daily rise and fall; and if further it should be a case where we deem it necessary to tap, we guide the operation in accordance with that line. This is all right as far as it goes, but, as regards the position of the fluid, the knowl-

edge that is thus obtained is very inefficient. At least I shall venture to say that it is no uncommon experience to put in an exploring needle with these indications for a guide, and to find nothing come out. It is an old observation that if, in children, you wait to tap until you can find a spot where dulness and absence of respiratory murmur meet, you may often wait until Nature or some better informed man wipes your eye. It is common enough that one draws fluid from such part of the chest as is apparently filled with air in inspiration, and gives clear resonance on percussion. The explanation of the fact may perhaps be that a good deal of fluid is required to damp the vibrations of the thoracic wall, or to drive out all the air and to produce dulness and complete absence of respiration. The respiratory sounds, too, may be transmitted by neighboring lung. All this I admit; but then, on the other hand, the admission is to some extent countervailed by another well-known fact—that many of the physical signs indicating fluid are produced by a quite moderate quantity. I have repeatedly seen a large part of the whole of the lower lobe of the lung quite airless when the amount of fluid has been no more than five or six ounces.

Well then, again, how great is the impairment of movement of the affected side in most cases of pleuretic effusion? It always seems to me that this is far more in many cases than can be explained by the existing amount of fluid, and more by far than a simple dry pleurisy effects.

An allied phenomenon is what is called Skoda's tympanitic resonance, one of the most valuable sign-posts in existence. It points to a generally impaired resonance all over the affected side, and whether you deem it to depend upon the diminished volume of air contained in the lung under the part percussed, or to diminished vibration of the thoracic wall, the diminished resonance is not adequately accounted for by so small a quantity of fluid as will often be found to exist at the base of the lung.

Now these various phenomenon are, it seems to me, fairly well explained by supposing that the fluid does not persistently occupy the base of the chest by the force of gravitation, but is more or less drawn up or pumped up or spread over the lung by the inspiratory expansion of chest-wall and lung, and varies therefore from time to time, according as the inspiratory force is weak or strong in this part or in that.

I think it may fairly be said that in pleuritic effusion, the lung is placed upon a water-bed, and just as in a water-bed the water recedes from such parts as are subject to most pressure, and accumulates for the time being elsewhere, so in the pleura there is more or less displacement under the inspiratory forces, and the water covers more or less of the lung. If the fluid be in small quantity, it may be spread all over the surface; if in large amount, then such parts as have most free play will best allow of the continuance of lung-expansion, and thus displace the fluid to less favored positions; and in these no doubt there will be a tendency for the fluid ultimately to be permanently located.

To my mind this supplies a satisfactory explanation of the extent of the dulness—the greatly impaired movement, met with in so many cases; of the existence of fluid in places where, from all the physical signs obtainable, it could not have been predicted; and we are prepared to be cautious, even if we lack the experience which certainly will make us so, as regards confidently affirming the existence of fluid at the base, because of such signs as dulness to percussion.

Lung collapsed from disease is a potent cause of dulness; and, given the existence of a small amount of fluid hampering the expansion of the lung, the base will undergo most collapse, not altogether because the fluid accumulates there, but because under all conditions of restricted action it is the less expanded, and the surrounding parts close in and make for complete airlessness. This hypothesis enables us also to see very well that in old people, with but little inspiratory power, and with impaired movement of the chest from senile changes in the cartilages, etc., a small quantity of fluid will produce an extreme amount of collapse; and the fluid will, in the absence of adhesions, be located at the base. Old people live much in the attics of their lungs, and find them, unfortunately, too often but garrets unpleasantly near the sky. The vigorous, on the other hand, will stand a good deal of fluid in the chest without the occurrence of any marked collapse.

This is, however, not the whole of the matter. Experiments have been made by Dr. Garland, of Boston, Massachusetts, upon dogs, which go to show that the fluid accumulates according to a particular curve. The experiments were upon dogs which were suspended by their heads, and their pleuræ then injected with either plaster-of-Paris or cocoa butter. I need hardly say that the results of such proceedings must be taken with a considerable amount of qualification. But Dr. Garland found that the lung was smaller in volume, having contracted before the encroaching fluid; but with medium-sized injections it was nowhere compressed or plunged into fluid, as we read in text-books. The cast all lay between the lung and the diaphragm. "In other words," he says, "instead of the fluid compressing and deforming the lung, as we are taught, I found that the lung retained its own outline, being merely reduced in volume, and that it dictated shape to the fluid." Dr. Garland attributes this method of storage to what he terms the retractile force of the lung, and I should certainly suppose that the expiratory forces are as active as the inspiratory, within their limits, in modify the position of the fluid.

Dermoid Cysts of the Ovary.

At the Chicago Gynecological Society, Dr. CHRISTIAN FENGER made the following remarks:

In entering upon the question of the dermoid cysts of the ovary, I wish to call attention to the two theories of their origin. According to Heschl, dermoid cysts in general owe their origin to isolated islands of the epiblast, displaced during embryonal development and located somewhere in the territory of the mesoblast. This theory of fœtal inclusion does not explain the origin of the dermoid cysts in the testicle and ovaries. It was not until His had shown that the internal genital organs are developed from a part of the embryo, the so-called "axenstrang," in which all the germinal layers are included, that we were able to understand the presence of dermoid cysts in those genitary glands.

The second theory of the origin of dermoid cysts in the ovary is the view of the older authorities, recently adopted by Waldeyer. Epithelial cells of the ovary, capable of transformation into the ovum with all its formative possibilities, may enter into an irregular formative activity and produce a dermoid cyst —a process almost analogous to a partheno-genetic development, as Ohlshausen

states it. This second theory would only explain the origin of dermoid cysts in the ovary, and would not enable us to understand their presence in all other parts of the body. Consequently it seems more natural to accept the Heschl-His theory, as this gives a satisfactory explanation of the origin of dermoid cysts in general, and is in conformity with Cohnheim's theory of the origin of all other new formations, from an isolated group of embryonal cells, dormant until the unknown cause of the new formation calls them into formative activity.

A dermoid cyst is always a monocyst, and if, as is seldom the case, we find more than one in the same ovary (Ohlshausen in one case found three), we may expect to have had more than one embryonal matrix, from each of which a cyst has developed, the one independent of the other. It often appears as if a dermoid cyst of the ovary were a multiple one, but closer examination will prove that we have before us a combination of a dermoid cyst and a proliferating cystoma, or more rarely a dermoid cyst with multiple local colloid degeneration of the stroma of the wall. Cystic transformation of the sweat glands—extensive cysts to the size of a fist—were seen in one case by Friedländer.

I shall not go any further into the subject of the dermoid cysts here, but only present to the Society three specimens removed by laparotomy within the past year, and will call attention to the points of interest illustrated by each one in particular.

Case I. This specimen, at the time of operation the size of a fist, now much smaller from shrinking in the alcohol, was removed from a girl of 20. There was no difficulty about the removal, but I am sorry to say that the patient died from acute sepsis thirty-six hours after the operation. Besides the sebaceous matter and the hairs, which you have seen in Dr. Jackson's specimens, we find in dermoid cysts very commonly—in from 20 to 50 per cent. of the cases—teeth inserted in the soft dermoid wall or in pieces of bone contained in the latter, or finally, free in the contents of the sac.

As a rule there are only a few teeth in a cyst; but Schnabel has seen, in a case of a girl of 13, over 100, and Autenrieth describes a case in a 22-year-old woman, in which 300 teeth were removed and as many more left in the cyst. As Ohlshausen states, it is impossible to understand the presence of such numbers of teeth without the explanation that, the same as in children, multiplication of the enamel germ takes place, and a set of milk teeth are followed by a set of permanent ones. That this is more than a mere theory is proved by a specimen in Rokitansky's collection in Vienna, in which there is seen a milk tooth with the root absorbed down to the crown by atrophy from pressure of the overlying permanent tooth. Spencer Wells, in his "Ovarian Tumors," states that he has seen one similar instance. In the specimen before us this fact is illustrated to perfection. From the soft parts on the surface of this little piece of bone, in the wall of the cyst, you see attached a tooth corresponding in shape and size exactly to a temporary incisor of the upper jaw. I have made an incision through the gum, if we may use that expression, and, as you see, the root is absorbed almost down to the crown. When we turn this milk tooth to the side, we see the crown of the overlying tooth. This is larger, and has the exact shape of the corresponding permanent incisor.

Case II. The next specimen is a very large dermoid cyst, from the left ovary

of a woman at fifty. It filled the whole abdominal cavity up into the cardia, and gave the exact symptoms of a proliferated cystoma or multiple cyst, as there were felt, besides the main cavity, harder, lobulated portions, which I supposed to be smaller and more tense cysts. As she gave the history of a cyst which ruptured when she was 14 years old, and caused several months of suffering from peritoneal symptoms, and then disappeared, not to return until after the age of 45, I thought that a dermoid cyst was out of the question. At the operation, which was difficult on account of many adhesions and the nature of the contents of the cyst, I found this very large dermoid cyst, containing (*a*) Three or four gallons of a brownish fluid, in which floated hundreds of thousands of round, yellowish-white, small bodies, the size of a hemp seed up to a pea. I pass round a sample of them in these two glasses. These bodies are soft, have the consistency of butter, and are found under the microscope to consist of irregular masses of amorphous fat, with pavement epithelial cells interspersed here and there, single or groups. (*b*) A yellowish-white, butter-like mass the same as the small bodies if matted together, filling up entirely some of the chambers of cyst, with no fluid mixed with it. This peculiar arrangement of the fat is rare. Rokitansky saw in a cyst sixty bodies the size of a hazel-nut and very many the size of a pea swimming in a brownish fluid. Routh, according to Spencer Wells, saw a similar case, the balls showing under the microscope concentric layers of amorphous fat around a nucleus of cholesterine crystals. Fraenkel, cited by Ohlshausen, found the whole contents of a dermoid cyst to be numerous hard, mostly round or irregular balls, consisting of amorphous fat, fatty degenerated epithelial cells, and hairs. The shape of the cyst is peculiar, inasmuch as it gives the appearance of a conglomeration of cysts. But close inspection shows that all of these communicate with each other so as to form one large though very irregular cavity. Thus in reality we have before us a monocyst, characteristic of the dermoids, as I mentioned before. In the wall, however, we find a number of smaller cysts the size of a pea to a hazel-nut—these do not contain the same fatty material as the main cyst, but a colloid mass, and are due to secondary colloid degeneration in the wall of the latter. The inner surface of the large dermoid cyst shows in some places irregular masses of bone imbedded in the wall, and further, as in Dr. Jackson's cases, the following condition: We do not find typical skin with hairs, sebaceous glands, epidermis, and so on, everywhere on the inside. This is found only on part of it, forming one or several irregular islands. The remainder of the cyst wall is smooth, has the characteristics of an ordinary cystoma, with a single layer of epithelial, cuboid, or cylindrical cells. It may be that the dermoid portion of the wall secretes the fat and the cystoid portion mainly a serous or albuminous fluid. Movements of a cyst containing at the same time a thin serous fluid and sebaceous matter might (Rokitansky) shape this suspended fat into the small round masses just the same as butter when in the process of churning. However, if this was the right explanation, it appears that this peculiar formation is seen only in very exceptional cases. The right ovary was transformed into a dermoid cyst the size of an orange. Notwithstanding the dermoid cysts on both sides, the woman had a number of children, the youngest 16 years old at the time of the operation. The patient never rallied from the shock of the operation, and died 12 hours afterward.

CASE III.—The third specimen is a dermoid cyst taken from a girl of 23. It was noticed for about one year and a half before the operation, at which time it was one and a half times as large as a child's head. There was no particular difficulty about getting it out. When I opened the abdomen and came on the cyst it was transparent, so that I did not think it was a dermoid cyst, and I inserted a Kœberle's trocar, which of course we should never do in dermoid cysts if we can help it. Immediately the trocar was stopped up by what I found later was a mass of hairs and sebaceous matter, so that I had some difficulty in keeping the abdominal cavity clean. However, she recovered without any greater trouble than a little abscess in the abdominal wall from one of the sutures.

Malignancy of a dermoid cyst from combination with carcinoma, sarcoma and myoma.—These tumors originating in the tissues of the cyst are not so very seldom met with, and have been observed more commonly of late years because a more minute microscopical examination is made now than in former years. Ohlshausen mentions as bearing upon this subject a statement of Doran that he had seen in several instances malignant tumors of the abdominal cavity follow extirpation of dermoid cysts. On examining the main wall of the specimen before us, we find on the dermoid island with its hairs and a plate of bone in the wall, the following unusual formations:

(*a*) A large black mole. It is of irregular lobulated shape, two by three inches in diameter, slightly elevated over the surrounding skin, and has a velvety uneven surface without hairs. Microscopic examination shows the common structure of pigmented moles, which as you will remember has a great similarity to that of a sarcoma.

(*b*) A papilloma the size of a pea. You will see it outside of the mole on the skin over the bony mass. It is surrounded by a thick wrinkled skin beset with hairs. On transverse section it shows a solid centre covered with pointed excrescences resembling exactly a large wart with long papillæ, as we sometimes find them on the skin of the hand. A detailed microscopic examination and description of all the specimens is not as yet finished, but I intend to give it in a future discussion. It is sufficient, however, here to call attention to the important bearing the two benignant new formations found in this cyst have upon the malignancy just spoken of. It is well known that moles often furnish the soil for sarcomas, and that warts or papillomas, for years benignant, sometimes all of a sudden commence to grow because they are transformed into a carcinoma or a sarcoma. The rapidity with which a dermoid cyst sometimes will grow involves a great nutritive hyper-activity. I can understand that this, in its turbulent way of forming tissues without an ætiological object, could cause the physiological resistance to disappear and thus open up the gates for malignant tumors.—*The Obstetric Gazette, May, 1887.*

II. MATERIA MEDICA AND THERAPEUTICS.

Treatment of Orchitis by Salicylate of Soda.

Dr. PIGNORET, in his Thèse, insists on the good results obtained in the treatment of specific (gonorrhœal) orchitis by salicylate of soda. In a few hours pain diminishes, and if the administration of the drug be persisted in, disappears totally. Dr. Henderson, of London, already recommended this agent in twenty-grain doses hourly until the pains were eased, and Dr. Pignoret, after having tried it in several cases, affirms that it is superior to every other treatment.

Naphthalin in Tuberculosis of the Intestines.

Dr. BORELIUS, of Upsala, has obtained excellent results in the treatment of tuberculosis of the intestines with naphthalin. Three cases, which had presented obstinate abdominal pain and severe general symptoms, were relieved after taking naphthalin with powdered coffee four or five times daily, in doses of 7 or 8 grains. The post-mortem examination in these cases showed the intestinal ulcers clean and in process of healing, and many of them already cicatrized. The urine was often colored darkly; but in one case only was dysuria observed, which became so severe that the drug was abandoned.

A Case of Acute Poisoning in a Child by Carbolized Cotton.

All observers have been struck by the fact that phenic acid is badly tolerated by young children. The case cited by M. JULES SIMON confirms this. A child of twenty-two months, with submaxillary adenitis, was treated by an external application of iodine. An ulcer succeeded the usage of this iodine tincture, which was very old and caustic. The physician applied upon the sore a layer of carbolized cotton. The child was soon prostrated and chilly, the urine becoming as black as ink. When the phenicated dressing was removed these symptoms rapidly disappeared, and the child recovered. It is necessary, therefore, to refrain from using carbolized preparations with children. Antiseptics are plenteous—boric acid, corrosive sublimate, iodoform, etc.—*Le Concours Médical, May 28, 1887.*

Cold Water Enemata in Catarrhal Jaundice.

Dr. GLUZINSKI, writing in a Polish journal (*Lancet*, April 23), says he has found excellent results by following the treatment recommended by Krull—injection into the bowels of large quantities of cold water. Röhrig and Mosler have shown, by experiments on dogs, that such injections render the bile more liquid and abundant, so that it more easily overcomes any obstruction. At first water at 59° F. is injected into the bowel until the patient complains of distension in the abdomen. The water should be retained as long as possible; most patients could

retain two quarts for from a quarter to half an hour. The enema is repeated the next day with water at 63°, and on the next at 67°; no injections should be made with water over 72°. Four or five injections are sufficient to produce the desired effect.

On the Influence of Iodide of Potassium upon the Elimination of Mercury.

SOUCHOW (*Vratsch, No. 44, 1884*), concludes:

1. The elimination of mercury by the urine begins later, and the quantity of mercury eliminated is comparatively smaller, in cases where the patient is taking at the same time iodide of potassium.

2. The iodide of potassium administered during or after a mercurial course lessens at once the quantity of mercury eliminated daily.

3. Consequently, far from contributing to the elimination of mercury, it seems to prevent this elimination, and would have no utility in poisoning by mercury, as Melsens thought. The author draws his experience and observations from numerous patients in the syphilitic clinic of Professor Tarnowski.

The Physiological Effects of Cold and Hot Baths.

According to the experiments of M. QUINQUAUD, very cold baths increase the absorption of oxygen twice or three times, and the excretion of a very nearly equal proportion of carbonic acid from the lungs. But if the lowering of the body temperature be excessive (from 82° to 72° F., in the rectum), the reverse effect is produced. When a dog whose temperature has been lowered so far that the animal is about to succumb, is plunged immediately into a bath at the temperature of 122° F., he is quickly brought back to life. Cold baths produce analogous effects, though less decided, upon the interstitial combustions and oxidations. Certain clinical applications are derived from these experiments, notably the following: Cold baths decidedly increase glycohæmia and glycosuria; these must therefore be employed with great reserve in the case of diabetes.—*Le Concours Médical, April 23, 1887.*

Cirrhosis

Has been generally considered in text-books to be extremely rare in childhood, but M. LAURE, of Lyons, has, in a work which has just appeared, proved the contrary. He has been able to collate 51 cases, of which five came under his own notice. It will be thus seen that cirrhosis depends on other causes than that of syphilis or alcoholism. Amongst the causes infectious fevers, scarlatina, small-pox, diphtheria, measles, etc., play an important part. M. Laure studied especially the effects of measles, and frequently he found hepatic alterations. The symptoms of the affection differ but little from those witnessed in the adult: hepatic congestion, painful digestion, diarrhœa or constipation, increase in the volume of the liver, with slight ascites, dilatation of the subcutaneous veins, and icteric tint. At a more advanced period, general œdema appears, with dyspnœa, diarrhœa, and all the symptoms of confirmed cachexia. Treatment has but a limited influence on the progress of the affection.

A Simple Inhaler.

Dr. THEO. MAXWELL (*Lancet*, April 23) gives a simple method of making an inhaler. Take a piece of India-rubber tubing about $\frac{3}{8}$ inch in diameter, and $2\frac{1}{2}$ inches long; cut out three-quarters of the circumference of the middle third; there will then be left two tubes, $\frac{3}{4}$ inches long, joined by a mere band also $\frac{3}{4}$ inches long. Roll up a little strip of blotting paper and insert into each of the tubes. These will absorb from three to five minims each of liquid. The apparatus is then bent to the form of a U and inserted into the nostrils, the band resting against or below the bridge of the nose. The patient should inspire by the nose and expire by the mouth. A simple chloride of ammonium inhaler is thus made: remove the piston of a glass syringe (male or female), the larger the better; take four pieces of dampened sponge, such as will fit the syringe easily, and place one of them down near the end; next to this place the second piece moistened with a dozen drops of strong hydrochloric acid; next place the third, simply dampened; and lastly insert the fourth moistened with a dozen minims of dilute solution of ammonium; close the whole with a perforated cork. After being cautiously tried, the patient is told to smoke the "patent cigar" from the nozzle.

Therapeutics of Remittent Fever.

The concluding portion of the article by Dr. J. T. JONES, of New Orleans (*Atlanta Medical and Surgical Journal*, *May*, *1887*), does not claim that quinine checks remittent fever in every case. It is even sometimes contra-indicated for some cause. If there is tenderness over epigastrium, nausea, or vomiting after quinine, a mustard plaster or even fly blister may be required locally. To stimulate the liver, quietthe stomach, drain portal congestion, and open bowels, take on empty stomach a grain of calomel with twentieth grain of mercury bichloride. Use small doses of digitalis when circulation is feeble, and as a diaphoretic and diuretic when urine is scanty or high-colored. Tepid sponging reduces temperature. Warm pediluvia restore warmth, when cold hands and feet indicate internal congestions. Congestive brain troubles are relieved by ice-bags to head and warm foot-baths, but discontinue if the pulse flags. Next to quinine, blisters to the feet, calves of legs, etc., during remissions, are useful in checking the disease. They produce a nervous stimulant impression and act as derivatives. Nervous stimulants (camphor, valerian, etc.) are good in nervous depressions, low muttering delirium, etc. Do not forget proper supporting measures.—*Virginia Med. Monthly*, *June*, *1887*.

Carminatives and the Absorption of Gas by the Intestines.

Some experiments which were performed several years ago by Drs. LAUDER BRUNTON and CASH, with a view to determine how carminatives act in relieving flatulence, have just been published. The gases used in the experiments were atmospheric air, carbonic acid gas, hydrogen, marsh gas, coal gas, and sulphuretted hydrogen. With the exception of one experiment, the oil of cloves was the only carminative used. In each experiment they first tested the gases alone, and then again after the administration of the carminative. They found that little or no absorption took place when atmospheric air, hydrogen, coal gas, or marsh gas was used, and the addition of the carminative did not seem to increase the

absorption. It was only in the case of carbonic acid that the carminative seemed to aid in absorption, and this was due probably more to the effect on the movements of the intestine than to direct absorption of gas. The oil of cloves caused a marked increase in the secretion of the intestine—a fact which perhaps explains the advisability of combining carminatives with purgatives. In regard to sulphuretted hydrogen it was found that its absorption proceeded so rapidly as to produce even fatal poisoning, but carminatives did not exert much influence in increasing the absorption.—*St. Bart. Hosp. Rep.*, vol. xxii.

Physiological and Clinical Studies on Sparteinum Sulfuricum.—(*Transactions of the Belgian Academie of Medicine in Brussels.—La Semaine Medicale, No. 14, 1887.*

MASIUS arrives at the following final results:

1. In small doses sparteine by no means influences the pulsation of the carotids in the dog.

2. In relatively moderate doses it diminishes the irritability of the vagus, consequently increases the pulse-beats, which therefore become less abundant and strong.

3. In poisonous doses it produces paralysis of vagus, asphyxia, as well as irregular pulsations. The pulse at first becomes fuller, whilst the frequency successively diminishes; then it becomes smaller, and with increasing heart-action there occurs in the first place an alternate pulse and finally collapse of the heart.

4. Blood-pressure sinks but a very short time before death.

5. In the physiological condition the alkaloid in no wise acts upon the *secretions of the kidneys.*

6. In the pathological condition its influence on the heart is as uncertain as its influence on the *urine*, and the subjective state of the patient.

Cholera in South America.

Dr. L. PEACAN, of Buenos Ayres, warmly recommends a plan which he has for many years past pursued with much success in the management of cholera. When a typical case with vomiting and diarrhœa comes before him, he immediately applies a cautery behind the right ear over the condyle of the lower jaw, with the object of stimulating the pneumogastric, and thus paralyzing the action of the sympathetic on the abdomen. He then administers six centigrammes (six-sevenths of a grain) of calomel, which dose is repeated every five hours. Half an hour after taking the first of these powders a mixture is commenced consisting of phosphoric acid, carbolic acid, tincture of opium, tincture of ginger, chloric ether, and mint-water, which is supposed to arrest vomiting and diarrhœa, to allay thirst, and to calm spasm—being, indeed, he states, sufficient to cure mild cases by itself. When the cramps are severe, a sedative dose of opium is added; and when there is marked prostration of the nervous system, tincture of coca. If the diarrhœa continues, forty-six grains of glycerole of tannin are given in coffee three or four times a day, and six grains of Dover's powder for three or four nights in succession. The patients are allowed to have as much sulphuric acid lemonade as they care for. In addition to internal medication, warm frictions and sinapisms are applied, especially over the epigastrium.

Treatment of Tuberculosis by Rectal Injections of Sulphureted Hydrogen and Eucalyptol.

M. PERRET recounts the principles upon which M. Bergeon has instituted his method of treatment, and reports eighteen cases treated by himself and by M. Chappet. The presence of the bacillus had been proved in all of the patients. Evening and morning three litres of carbonic acid which had been passed through half a bottle of sulphur water were injected. In four cases eucalyptol was substituted for the sulphur water. M. Perret divides his cases into three classes: First, those with febrile phthisis; second, phthisis with relative apyrexia, that is to say, where the temperature was only temporarily above 100°, without going above 102°; third, the true apyretic cases. M. Perret, in the first place, shows that the local condition is not modified by the treatment, and that the tuberculosis may proceed in spite of it. Following this, he studies its action upon the nutrition, upon the cough and expectoration, upon the functions of the digestive tube, upon sleep, and upon the temperature. He finds that generally the treatment is poorly borne. The following, in brief, are his conclusions: First, that the rectal injections specified do not appear to kill the microbe; second, that they may modify the bronchitic phenomena and diminish expectoration; third, that they act upon nutrition, especially in the apyretic cases, in the same way as other medicaments; fourth, that they answer to particular indications.—*Le Concours Médical, May 28, 1887.*

Tobacco Amblyopia Rapidly Cured by Withdrawal of Tobacco and Hypodermic Injections of Strychnia.

The victims of tobacco amblyopia are usually people who smoke strong and poor quality of tobacco, in excessive quantities, in pipes. The following cases, however, reported by Dr. H. ARMAIGNAC in the *Revue Clinique d'Oculistique*, for March, 1887, show that cigarettes are capable of producing the disease.

Dr. Armaignac's patient was an engineer, forty-three years old, who smoked twenty-five cigarettes daily for many years. During the past year he had noticed that his vision for both near and distant objects had become considerably weaker. Since the three months previous to March 5, 1886, the amblyopia had increased more rapidly, until the vision was reduced to five-eighteenths in each eye. The whole visual field seemed to be covered by a thin veil. The amblyopia was not more pronounced at night than during the day, provided the illumination was sufficient. Color vision and extent of visual field were normal. A careful ophthalmoscopic examination did not reveal the slightest perceptible change in the fundus of the eye. The patient's habits were good, and he did not drink alcoholic beverages. Believing it to be a case of amblyopia due to the toxic effects of tobacco, the doctor ordered its discontinuance, and ordered the hypodermic injection of two centigrammes of sulphate of strychnia. After the first day's treatment his sight improved, and in twenty-five days the vision had become absolutely normal. Since that time there had been no relapse.

Benzoin in the Treatment of Whooping-Cough.

The treatment of whooping-cough is as varied as it is unsatisfactory. It would occupy too much space to enumerate all the pretended infallible remedies, which

only appeared to disappear. And thus, when a new method is recommended it finds many incredulous minds. However, M. Moinard, of the Tenon Hospital, has adopted a treatment which he avers has proved very successful in his hands. This treatment consists in insufflations by the nose of antiseptic powders, tannin, boric acid, iodoform, benzoin) and to this latter he gives the preference. He used it in fifty cases, and declared that he obtained a rapid diminution of the fits of coughing. One case was very singular. A child, aged six months, was ill for more than six weeks from whooping-cough when he saw it. It had about forty fits a day: insufflation of benzoin was used, and the child was well in a week. The formula he used is as follows:—Benzoin in powder, ʒj; salicylate of bismuth, ʒj; sulphate of quinine, xx grs. A little of this powder is inserted into the end of an india-rubber tube and introduced into the nostril, the other end of the tube is taken into the mouth of the attendant or parent and blown through, the powder falls on the desired spot, and the same operation is performed on the other side. From three to five insufflations are made in the day. No danger or pain attends this method of treatment, and the children offer very little resistance. In conclusion, M. Moinard brought under the notice of his colleagues several cases which certainly proved greatly in favor of the treatment.

Antipyrin as an Anodyne in Locomotor Ataxy.

C. W. Suckling, M. D., writes in the *Brit. Med. Journal*, June 11, 1887: In the Journal for May 28, I notice that mention is made of the observations of Professor Germain Sée, on the anodyne action of antipyrine.

M. Germain Sée believes that this drug is the remedy *par excellence* for pain, and he has found it efficacious in rheumatism, gout, and in neuralgia. Moreover, he reports that in four out of five cases of locomotor ataxy the pains were removed by the drug.

Lépine has found that antifebrin relieves the pain in this disease.

I have tried antipyrin in three cases of locomotor ataxy, in which the pains were severe, with relief in each instance; in one case whith complete abeyance.

A man, aged 48, in an advanced stage of locomotor ataxy, applied to me for relief on account of severe shooting pains in the legs, of almost daily recurrence. I gave him antipyrin in ten-grain powders, one to be taken in water when the pains came on. After taking two powders the pains ceased, and he was free from them for a week, when they returned, to be again checked by a powder. He stated that he had not been so well for twelve months, having been continually in pain. It must be remembered that Althaus, several years ago, recommended salicylate of soda for the pains of locomotor ataxy, and this drug greatly resembles antipyrin in its therapeutic action.

I think that antipyrin will be found to be of great use in the treatment of these hitherto intractable pains.

A Case of Acute Poisoning with Chromic Acid.—*Prag. Med. Wchnschr. XII. 4, 1887.*

R. v. Limbeck. An official forty-nine years of age attempted suicide by drinking about 0.3 liter (1½ pint) of the contents of one of the elements of a galvanic battery (zinc-carbon chromic acid). After a quarter of an hour intense abdomi-

nal pains, together with vomiting and diarrhœa, occurred. On receiving the patient at the hospital he showed all symptoms of collapse. Cleansing of the stomach was at once resorted to. Half an hour after this the patient vomited about one liter of a dark-brown, red, thready mass, which was strongly acid, and contained much chromic acid. Subcutaneous injections of ether, and, on account of the threatened collapse, a camphor mixture, was given internally. Careful examination showed no pathological changes in the lungs or the heart. The abdomen, however, was somewhat puffed, and the regions of the stomach and liver were exceedingly sensitive to the touch. The amount of urine voided during the first twenty-four hours was 550 ccm. (33½ cb. in., spc. weight 1.035). It was dark brown-red, and highly albuminous. Microscopic examination showed numerous red blood corpuscles and renal epithelium, in part much altered. The blood disappeared from the urine the third day, and the albumen the sixth day, on which day the patient was dismissed from the hospital by his own request. In the filtrate of the vomit chromic acid could be directly detected. The urine of the first twenty-four hours, and the excrements, had first to be treated with saltpetre, and only after neutralizing the saltpetre could the chemical reaction of the chromic acid be obtained.

Fuming Inhalations in Asthma.

Sir James Sawyer, M. D.—Many years ago a very intelligent gentleman, who had long suffered from severe dyspnœal paroxysms, almost every night, of bronchial asthma, informed me that he had tried a large number of remedies, but that nothing relieved him like the inhalation of the fumes of an "anti-asthmatic powder," which could only be obtained at a particular place in London. This incident led me to examine with some care this method of relieving asthma. The result was that I constructed a formula for an "asthma powder," which has fulfilled my expectations. For many years I have prescribed the following fuming inhalation for many of my asthmatic patients, with marked success:

℞. Potassæ nitrat. . . . . ℥ss.
Pulv. anisi fruct. . . . . ℥ss.
Pulv. stramonii fol. . . . . ℥j. M.

A thimbleful of the powder, placed on a plate, is pinched in a conical shape and lighted at the top. It burns with a smouldering flame, like a pastille, and is held near the patient, who inhales the smoke. This method of treating the dyspnœa of bronchial asthma is very marked in its good results in a large proportion of cases. The remedy, however, is only palliative of the asthmatic paroxysms. But in these cases we are often called upon to give prompt relief of this kind. For the reduction of the frequency and severity of the asthmatic attacks many other resources are, of course, available in the directions of dietetic, climatic, hygienic, and medicinal therapeutics.—*Birm. M. Rev., May.*

Local Anaesthesia as an Effect of Irritating the Anterior Surface of the Neck.

At the Academy of Sciences of Paris, on April 4, 1887, Brown Séquard stated that an incision, even a slight one, of the skin of the neck, especially in the neighborhood of the larynx, causes disappearance of the sensibility of the anter-

ior two thirds of the cervical region, and the analgesia may even extend further. It does not therefore require much courage for one to cut his throat. The skin of the anterior part of the neck cannot be cut without diminishing the sensibility to the causes of pain in the whole anterior half of the neck. Usually the analgesia is complete only in the portion which covers the larnyx and the trachea. The greatest capacity for provoking general anaesthesia by inhibition is when the filaments of the superior laryngeal nerves ramify. If surgeons can perform tracheotomy painlessly, it is not, as they believe, because sensibility is diminished in such cases by asphyxia; it is rather because the beginning of the incision of the skin produces by inhibition a diminution or loss of sensibility. Physicians sometimes find persons who have been hanged to be dead in spite of the fact that the suspension has not been effectual in excluding the air. This is because the larynx and trachea are capable, under the influence of a mechanical irritation, of producing inhibition of the heart, of the respiration, and also of all the cerebral functions. The effects of this irritation are analogous to those of punctures of the medulla. In both cases there occurs loss of consciousness, diminiution and loss of the circulatory and respiratory movements, and arrest of exchanges between the tissues and the blood.—*Le Progrès Médical*, April 28, 1887.

Polk Root in Mammitis.

Polk root—*Phytolacca decandra*—was advocated by a writer in the *American Journal of Medical Science*, of which I have been a constant reader, more than a decade ago, as a valuable remedy in mammary abscess.

I consider it a true anti-galactagogue. Being such, it rests the inflamed gland, and physiological rest is the greatest of all curative agents in a number of diseases. The surgeon's splints keep at rest the muscles that surround the fractured bone, and also secure their apposition; nature does the knitting; opium is the internal splint that quiets the bowels when they or the peritoneum are inflamed; belladonna paralyzes the muscles of accommodation about the eye, gives it physiological rest, and repair, uninterrupted and ever ready, does its work.

When I have a case of threatened abscess, and I know it by the pain and swelling of the breast, which are among the very first symptoms, for "*ubi irritatio ibi affluxus*," I give 10 drops of the fluid extract phytolacca decandra and a brisk purgative. Sometimes I empty the breast and put on a bandage. I never allow rubbing, handling and poulticing. The dose of phytolacca is repeated every hour for three or four times, then the intervals lengthen gradually *pro re nata*. True, I have once failed with this agent, but only once, but I count my successes in averting suppuration by the tens. When it becomes necessary to wean the child, or dry up the milk, or lessen its secretion in those who are weakened by its profuseness, and they are not few, because of the death of the infant, or for other reasons, I have found it to be an unfailing and pleasant anti-galactagogue.—Prof. J. S. Todd, M. D., in *Atlanta Medical and Surgical Journal*, June, 1887.

Apomorphia and Atropine in Opium Poisoning.

In a letter to the *N. Y. Med. Journal*, Dr. Alexander F. Samuels, of La Crosse, Wisconsin, says:

A few months ago I was called to see a young woman who had taken poison. I could not learn what poison had been taken, so I had to go prepared for any emergency. I found the patient, a woman twenty-four or twenty-five years old, eight months pregnant. She had swallowed, apparently, three or four drachms of laudanum, with suicidal intent, and had resisted all efforts to save her. When I arrived she was in a semi-comatose condition. I saw at once that it would be useless to try the stomach-pump, but, having my case of hypodermic pellets with me, I easily persuaded her to swallow a little water in which I had dissolved an eightieth of a grain of atropine. Waiting a few minutes until the coma was more decided, I readily inserted a hypodermic containing a sixth of a grain of apomorphine into her arm. In less than four minutes the stomach was emptied with a gulp. She rapidly recovered her consciousness, opening her eyes and looking at me very reproachfully. I now had no trouble in persuading her to swallow a cup of strong coffee, which I had ordered to be made as soon as I came. The coffee was instantly rejected by the stomach. Another cup, taken fifteen minutes afterward, was retained about five minutes, and then thrown up. The third cup, containing one one-hundred-and-fiftieth of a grain of atropine, was retained. In three hours from the time I arrived she was sitting up, wide awake and out of danger. Her attempt at suicide had one good effect: it brought about kinder treatment from her family. In four or five weeks I delivered her of a strong, healthy male child, and she has had no suicidal tendency since.

Tincture of Cannabis Indica in Indigestion.

Mr. S. J. Rennie, Staff Surgeon, Cawnpore (*Indian M. Gaz.; Practitioner*, April), records several cases of dysentery treated with cannabis indica according to the following formula:

℞. Tinct. cannabis indicæ . . . . . min. xv.
Bismuthi subcarbonatis . . . . . gr. v.
Mucil. acaciæ . . . . . ʒss.
Misce et adde
Tinct. zingiberis. . . . . min. xx.
Tinct. cardamomi compositæ . . . . . min. xx.
Spiritus chloroformi . . . . . min. xx.
Aq. cinnamomi ad . . . . . ℥j.
Ter die.

Even in this dose it may be necessary to order the drug to be taken after meals, as it occasionally produces vertigo. It is pleasant to take, and there is no subsequent nausea. The administration requires to be kept up for several days after all symptoms have ceased. It is in the *subacute* and *chronic* forms of the disease that the medicine gives the best results. It acts also in the acute forms, but not with the same certainty. One of the cases had been under treatment for 85 days in another station. After commencing to take the mixture he made a rapid recovery, and was well in eight days. Another case had been treated with the usual remedies for seven weeks with no result; the condition of the patient was very serious, and the hemp mixture was tried. The treatment was started on Sunday, and on the following Monday the patient was well and able to walk about.

Action of Aconite in Relation to the Body Temperature.

Aconite being a drug frequently used in febrile conditions, it occurred to Drs. LAUDER BRUNTON and THEODORE CASH that it would be important to ascertain whether that action is altered by the temperature of the animal's body at the time of administration. A further object of inquiry was the difference between the action of drugs in different animals in which the nature of tissue-change is dissimilar, *e. g.*, the excretion of urea and uric acid. Their mode of operation was to place the animal in an artificially cooled or heated chamber; two zinc boxes one inside the other being employed for the purpose, and the space between the two being filled with ice or warm water as required. The animals chosen were pigeons and guinea-pigs, and the drug was introduced by hypodermic injection. They found that in pigeons aconite always reduced the temperature, both under normal conditions and when the temperature had been artificially raised or reduced. The temperature most rapidly returned to the normal when the birds were kept in a warm place afterwards. Repetition of the dose, after the effects of the first had passed off, produced as full effects as the original dose. In guinea-pigs cooling retarded the fall of temperature and its return to normal. The temperature of animals exposed to a heated atmosphere was but little affected by aconite, and large doses diminished the resistance of the animal to external heat. There was a rapid fall of temperature when the animal was exposed to cold when the drug was administered. The general conclusions are that if gout be really, as suggested by Dr. Fothergill, a reversion to the type of nutrition normally existing in birds and reptiles, aconite ought to be especially useful as an antipyretic in gouty subjects. And further, that inasmuch as the antipyretic action of aconite is more marked and more certain when the animal is subjected to a low external temperature after the administration of the drug, it would be advisable to employ cold sponging or cold baths in conjunction with the administration of aconite. (*St. Bart. Hosp. Rep.*, vol. xxii.)

Permanganate of Potassium in Chronic Malarial Affections.

Dr. I. VROTZ, of the Virgin Islands, British West Indies, writes to the *New York Medical Journal*, May 21, 1887:

Last year I was appointed acting medical officer in the Island of Dominica, B. W. I., and in my official report for one month I forwarded the names and residence of a hundred and forty-two persons whom I attended, among them seventy-five with malarial fevers. I do not propose to bore your readers with details of type, etc., All the cases were finely orthodox in behavior, which leads me to remark that, in all my tropical and other experience, I have never seen the hybrid "typho-malarial fever." It is time—quite so—that that caudal appendage should be dropped. I doubt its existence as faithfully as some doubt that we ever dropped ours. Most of the inhabitants of the district where I practiced lived in thatched huts, badly ventilated, with the natural soil for the floor. As the country abounds in rivers, and rain is constant, they were very damp. The food eaten consists of carbohydrates and boiled fish—a diet which, with their surroundings, certainly renders them unfit to resist disease. I was consulted by women with fever and amenorrhœa or dysmenorrhœa due to exposure, and malarial anæmia or toxæmia. It was to them that I first administered permanganate of potassium,

and it cured them not only of their uterine symptoms, but of their malarial fever also. I afterward gave it to men and children, and with very interesting and successful results. The usual dose was from half a grain to a grain, in water, three times a day. In private practice I give five grains of pepsin after the dose, to prevent the nausea, which is the only drawback to the use of the drug. Since my appointment as medical officer of the Virgin Islands, I have been using the same treatment here with good results. I have not heard or read of its having been used before for malarial fevers. As to the *modus operandi* of the permanganate I will say but little, and that what I know—namely, that, as a germicide, it is one of the best, and one that is harmless even in strong solution.

Collective Investigation—Hamamelis and Terebene.

The Collective Investigation Committee of the British Medical Association, through its chairman, Dr. ISAMBARD OWEN, has made a preliminary report on the action of hamamelis and terebene, of which the following is an abstract:

Hamamelis.—The form of preparation you employ; the doses? Is it efficacious in checking epistaxis? Hæmoptysis? Hæmaturia? Menorrhagia? Piles? Is it efficacious in the treatment of any other form of disease? Has it given rise to disagreeable symptoms?

The observer was requested to state upon how many cases of each affection his experience was founded. Forty-one reports to this series of inquiries was received. Tinct. hamamelis was the more general form of the drug used. Its benefit in all the cases used was distinctly recognized, and, in addition to the diseases above specified, hamamelis was recommended in the treatment of the hæmorrhagic diathesis, in catarrhs of the air passages—especially the upper regions, in some forms of diarrhœa, in prolapsed rectum, and in chronic catarrh of the uterus.

Terebene.—The inquiries upon this subject were: What is your experience of its effect in chronic bronchitis? Chronic pharyngitis? Chronic trachitis? Subacute or chronic laryngitis? Phthisis? Whooping cough? Pure asthma, not connected with bronchitis? Cystitis or gleet? Acidity? Flatulence? As an anthelmintic? Is it efficacious in the treatment of any other disease? Have you found it give rise to any disagreeable symptoms? How many cases of each affection do you base your experience upon? To this form of inquiry but twenty-six replies were received. From these it could not unfairly be concluded, from the weight of affirmative statements, that pure terebene is a drug of considerable value in shortening the course of chronic catarrhs of the air passages, though hardly to be considered as a specific. Flatulence and acidity of the stomach it appears to not unfrequently relieve. There was no certain evidence of any untoward effect from its use.—*British Medical Journal, April 9, 1887.*

Carbolic Acid Inhalations in Whooping-Cough.

In the *Deutsche Med. Wochenschrift*, No. 21, 1886, Dr. R. Pick, of Coblentz, published several cases which seem to show that the inhalation of concentrated carbolic acid solutions has a powerful curative action in whooping-cough. Dr. Kniaziolucki, of St. Zofia's Hospital in Lvov, in Galicia (*Wiadomosis Lekarskie*, No. 3, 1886, p. 82), accordingly tried the same method in a severe case of his own

occurring in a weak, emaciated, febrile girl, aged 9. The affection had lasted for about four weeks, and the paroxysms occurred about twenty-eight times a day. The inhalations of carbolic acid, either pure or diluted with an equal amount of distilled water, were repeated hourly, the administration being continued for ten minutes on each occasion. The number of paroxysms during the subsequent days fell to 20, 19, 12, 12, 6, respectively, and from the sixth day of the treatment the patient had not a single attack. The temperature became normal on the third day. After ten days' stay in the hospital the girl was discharged quite well. No poisonous symptoms were observed either in this case or in those related by Dr. Pick. Equally satisfactory results were obtained by Dr. W. Jakobski, of Odessa (*Wiadomosis Lekarskie*, No. 9, 1887, p. 280), who used a 50 per cent. solution of the acid, the inhalations being carried out for ten minutes every two hours. In one of his cases the daily number of paroxysms fell rapidly from thirty-two to six. Dr. Jakobski differs from Pick and Kniaziolucki only as regards the details of the method. They principally employ a mask resembling that used for giving chloroform; this is placed over the patient's nose and mouth. Dr. Jakobski, on the other hand, finding that the apparatus frightened children and led them to resist the application, devised an instrument like a toy, consisting of a pasteboard tube with gold paper gummed over it, and fitted with a handle. Within the tube are two thread nets, and between them a layer of Bruns' cotton-wool, which is moistened with the carbolic solution. Jakobski found that with this there was no difficulty in getting the little patients to take the inhalations.

On the Action of Thallii Sulphas.—*Jahrb. f. Kinderheilk. XXV.*; *S. I.*

A. STEFFEN has used thallii sulphas in different febrile diseases of childhood. Somewhat more than 50 cases were treated. Steffen prescribed 1¼ gr. (0.125 grm.) of thallii sulphas as soon as the temperature exceeded 89¾°F. One advantage offered by this drug when compared with other similar remedies, is that in childhood secondary effects only rarely occur, and if they do they are wholly without danger. These secondary effects are chiefly nausea and vomiting, whereas diarrhœa was never observed by Steffen. After administering the remedy the temperature begins to sink rapidly, slight cyanosis frequently occurring at the same time. As a rule, the temperature is within the normal, or at least below 89¾° F. an hour after the remedy is taken; two or three hours and several repetitions of the dose are but seldom needed to produce this effect. A short time after the diminution of temperature has been induced, the patient in most cases perspires freely, more freely, indeed, than after the use of any other antipyretic. The diminution of temperature was on an average 1.5° to 2.9°. The most marked reduction of fever Steffen observed in typhus and in diseases of the respiratory organs. In cases of typhus the mean diminution was 2° F. to 5.22° F., the maximum 5.4° to 2° F. In diseases of the respiratory organs (pneumonia, bronchitis, phthisis, etc.), a diminution of 2° F. to 8.2° F. was several times observed, more frequently, however, 5.4° F. to 6.8° F. In diphtheria, scarlatina and measles, the effect of thalline is less powerful. That the idiosyncrasy of the patient is of great import is self-evident. In some rare cases, with rapid increase of temperature, a pronounced chill and cyanoses were observed. The time which

elapsed between the period of administering the thallii sulphas and the period at which the fever reached such a height as to necessitate the repetition of the dose varied exceedingly. It generally was from 2 to 3, more rarely from 4 to 6 hours. That this interval became greater as the disease wore off is evident. The frequency of the pulse and respiration, their rise and fall, as a rule, coincided with the fluctuations of the temperature, though exceptions to this occurred, which can not be explained.—*Centralblatt für die Medicinischen Wissenschaften, No. 16, April 16, 1887.*

Cutaneous Eruptions Produced by Bromide of Potassium.

An editorial in the Boston *Medical and Surgical Journal*, May 19th, 1887, says: GRELLETY has recently read a paper before the Societé de Thérapeutique, in which he calls attention to the cutaneous affections which he has often witnessed as a sequel to the administration of bromide of potassium. These are acne, impetigo, eczema, furuncles, ulcerations, etc., often of a severe and obstinate nature; the cutaneous lesion is often accompanied by gastric disorders and great nervous depression, especially in dyspeptics or diabetics, where the kidneys perform their function badly. In cases where the medicine is imperfectly eliminated by the kidneys, it accumulates in the sudoriparous glands, and provokes tegumentary lesions; where there is irritation of the mucous membrane (as in bronchitis), the irritation is sure to augment under the use of the bromide, while any existing dyspeptic troubles are sure to be aggravated, especially when the preparation is taken on an empty stomach, or insufficiently diluted. Arsenic is considered the best antidote to the bromide, and Besnier is accustomed in his practice to give the two medicines together, that is, three, four or five drops of Fowler's solution with every three, four or five grammes of bromide.

Among the various eruptions produced by prolonged use of bromide of potassium, one of the most annoying is the furuncular, which is especially prone to follow the administration of large doses of bromide in diabetes. In diabetes the secretory function of the kidneys is always damaged, hence it is a mistake (in the opinion of this therapeutist), to give bromide to diabetics, especially when along with glycosuria there is albuminuria.

Grellety concludes that it cannot be too much remembered that there are conditions which render bromide of potassium almost a posion, and that before prescribing it, it is well to be certain that the remedy is not contra-indicated by the constitution, or the peculiar predisposition of the patient. The state of the lungs and the circulation of the skin, of the digestive tube and of the kidneys, is to be taken into account before the treatment is prescribed. In patients who perspire little, or whose renal functions are badly performed, bromide should be interdicted altogether.

Antipyrin as an Anodyne.

According to M. GERMAIN SÉE (Academy of Sciences), antipyrin is the remedy *par excellence* for pain, and far superior in every way to antifebrine. In 15 cases of subacute rheumatism, or hydrarthrosis, treated unsuccessfully by salicylate of soda and ignipuncture, the pain and swelling disappeared in a few days, and, the medicine being discontinued, there was no relapse. The same effect was ob-

served in cases of acute gout, both primary and secondary to chronic gout with chalky deposits. Antipyrin, to the extent of from 60 grs. to 90 grs. a day, removed both pain and swelling in from two to four days without any bad effect either on the heart or kidneys. But it is, above all, in nervous pain that its action is most remarkable. A first group comprises four cases of facial neuralgia, one of which was inveterate, six of migraine, with one failure, and four headaches. In a second series are classed five cases of sciatica, one of simple neuritis, two of diabetic neuritis, and two of neuritis with zona (one failure). Cases of lumbago and muscular rheumatism make up a total of 18. The third category relates to five cases of locomotor ataxia, in four of which the pains were removed by antipyrin. In the fifth instance it failed, as did also antifebrine. The last group comprehends those affections of the heart, aorta, and coronary arteries in which angina is a most painful symptom. In six patients with cardio-aortic disease, and in three others with aneurism, the painful manifestations disappeared entirely, without any evil effect being caused by the medicine on the strength or regularity of the cardiac pulsations. The dose given by M. Sée is from three to six grammes daily. If too much is given at one time, nausea and giddiness may supervene, but when the whole amount is divided into small repeated doses of half a gramme, no disagreeable effects are observed. Antipyrin may be given and continued for a length of time with but little risk. Antifebrine, on the other hand, is dangerous when administered in doses exceeding one gramme. It causes hæmoglobin to pass into the condition known as metahæmoglobin, and the blood, losing part of its oxygen, becomes of a chocolate color, cyanosis and collapse being the consequences. From laboratory experiments it is found that reflex excitability to electricity is diminished by antipyrin, and the sensory perceptivity of the cord is lessened—*Lancet, April 30.*

Antipyrine and Thallin in Typhoid Fever.

Dr. Francis Minot, of Boston, concludes a paper read before the Association of American Physicians, June 2, 1887, as follows:

So far as trustworthy conclusions can be obtained from the comparison of so small a number of observations they would seem to be as follows:

1. Antipyrine and thallin given internally have a remarkable power of reducing by several degrees the bodily temperature in typhoid fever within a period of from one to three hours, after which in most cases the temperature rises again in about the same length of time, sometimes to the original degree, but often not quite so high.

2. The use of the drugs did not appear to give rise to any unfavorable effects upon the course of the disease, even in fatal cases.

3. In general, the condition of the patient was more comfortable after the effect of the refrigerant medicine was produced; he was more tranquil, often slept, and frequently expressed himself as relieved.

4. The refrigerant medication by antipyrine and thallin appears to have no specific or decided effect upon the course or issue of typhoid fever. In some cases the general condition was apparently relieved or improved throughout the course, but in most cases these drugs can only be looked upon as palliatives, often contributing to the patient's comfort, and perhaps indirectly promoting his safety.

5. The failure of such efficient antipyretics as antipyrine and thallin to avert the fatal issue in many grave cases of typhoid fever, shows that the danger does not consist in high temperature alone, but that the latter is rather an index of the abnormal condition which we call fever, though probably adding somewhat to the danger.

6. By the internal use of antipyrine and thallin all the effects which are claimed for the treatment of typhoid fever by the cold bath are readily obtained without the trouble and inconvenience of the latter method, and without exposing the patient to the danger of exhaustion and shock consequent on the fatigue of removal from bed.

7. These remedies may be given without danger to the youngest patient in suitable doses, and indeed their beneficial effects are more decided with them than with adults.

A Novel and Painless Corn Salve,

According to *Magazine of Pharmacy*, consists of the following ointment, to be applied strictly according to directions:

℞	Acid salicylic	ozs.	1½.
	Lanoline (ol. lanæ)	"	2½.
	Creasote	"	2.
	Petrolatum	"	1.
	White wax	"	1.
	Cocaine hydrochlor	grains	10.
	Alcohol sufficient.		

Mix the two first-named ingredients until perfectly smooth and homogeneous. Dissolve the cocaine in the smallest possible quantity of warm spirit, and add the solution to the creasote, petrolatum and wax (the last being previously heated until quite soft), stirring these together in a mortar until cooled to the temperature of the air, then add the first mixture, and thoroughly mix the whole. If the consistence of the finished product be not sufficiently firm when quite cold, add a little more of the wax.

This ointment may be applied directly to the affected part on pieces of lint. If the wart or corn (which may be first slightly pared with advantage) rises to a considerable height above the skin-level, it should be surrounded by a little wall or ring of hard wax (or, better, of felt or leather soaked with melted wax, and thus stiffened), the edges of which are built up a little beyond the top of the corn. In this way a kind of "well" is formed, in which a larger quantity of the discutient ointment can be deposited than is otherwise practicable. This "well" should be covered with a disc of oiled silk, gutta-percha tissue, diachylon plaster, or in any other convenient way. The ointment, of course, needs to be frequently renewed, but a very few days of such treatment will be sufficient to disorganize a portion of the corn, which is dislodged with a blunt knife, and the process repeated until there is no further work of this kind to be done. Instead of this expedient the corn plaster would no doubt answer.

The cocaine may be omitted, if desired, in all cases except those where there is much natural inflammation, or a chronic tenderness of the skin.

To relieve soreness preparatory to treatment, the application of an ointment

consisting of cerate subacetate of lead 2 ozs., oleate zinc and lanoline each 1 oz., and oil eucalyptus 8 m., is highly recommended.

Methylal.

In a preliminary note in the *Vratch.*, No. 10, 1887, Dr. M. MOTROKHIN states that he has made a number of experiments with methylal, the new hypnotic, to which attention has been called by Dr. Personali. The following is the mode of preparation:

A mixture of 1 part methyl-alcohol, 1½ parts of pure concentrated sulpuric acid, and 1½ parts of water, is subjected to distillation. The distillate is purified by treating it with potash, filtering and re-distilling with chlorinated lime at 108° F. The product obtained is pure methylal. It is a light, colorless, easily evaporating fluid, of a pleasant aromatic odor, somewhat resembling that of ether and chloroform. It is neutral in reaction, and has a specific gravity of 0.8605 at 68° F. It is easily soluble in water, alcohol, and oils. The results of Dr. Motrokhin's experiments may be summed up as follows:

1. When inhaled, methylal produces sleep, which ceases soon after discontinuing the inhalation.
2. Sensibility to pain is diminished during sleep.
3. Respiratory movements become slower and deeper, but remain regular.
4. Methylal does not seem to have any influence on the heart.
5. In man, the inhalation of two ounces of the drug gives rise to anæsthesia, which is especially marked about the head, and to a state of light intoxication. No unpleasant secondary effects are observed.
6. The drug causes a diminution of reflex action, and lessens the irritability of the cerebral cortex.
7. It neutralizes the spasmodic action of strychnine and picrotoxin, when these substances have been given in moderate quantity. When the dose of the alkaloid is large, methylal hastens the fatal issue, since it has also to be given in poisonous doses.
8. The drug is administered either internally or through the lungs. Subcutaneous injection of it is very painful, and often gives rise to local gangrene of the skin.

With reference to Dr. Motrokhin's paper, Dr. Serges Popoff writes (*Vratch*, No. 11, 1887) that methylal is far from having no effect on the heart. On the contrary, it considerably retards the beats of that organ both in frogs and warm-blooded animals; it appears to act directly on the cardiac muscle and its ganglia. Moreover, the drug causes slowness and difficulty of breathing.—*British Medical Journal*, May 21.

Spermaceti, Fatty Acids, and Soaps as Dietetic Agents.

Many persons have an unconquerable repugnance to cod-liver oil and other fats used as food in wasting diseases, others fail to digest fat properly, and hence in many cases digestive disturbances result when the administration of fat is attempted.

In normal fat-digestion these substances are decomposed into the fat-acids and glycerin, and the liberated acids combine with the alkalies with which they come

in contact in the intestinal canal and form soluble soaps, which are easily absorbed.

The researches of Immanuel Munk have shown that the fatty acids alone are competent to produce the nutritive effect of fat, and that the glycerin with which they are in combination is not only unnecessary, but sometimes injurious.

Bearing these physiological facts in mind, Professor Senator has studied the effects of spermaceti, pure fatty acids, and soaps, as substitutes for cod-liver oil and other fats in the treatment of cases characterized by deficiency of fat or rapid wasting of tissue.

According to Senator, spermaceti was formerly much used as an internal medicament in coughs and other irritable conditions of the throat, especially in children. He uses it, however, frequently as a substitute for cod-liver oil. When finely pulverized and mixed with sugar and flavored with some essential oil, as oil of lemon, it can be taken in teaspoonful doses without producing any nausea. It is, in fact, quite palatable. Two and a half to five drachms of the spermaceti may be taken in the course of the day, and thoroughly digested and absorbed.

The pure fatty acids are given in a mixture of palmitic and oleic acids, two of the former to one of the latter. This mass can be made into pills, which, if keratinized, pass through the stomach unchanged, and are dissolved in the secretion of the intestinal canal and there readily absorbed.

Senator regards the saponified fat acids (soaps, in short—soda soap; sapo medicinalis) as preferable to either fats or pure fat-acids. Being already in a soluble and absorbable condition, they make no demands upon the digestive capacity of the intestine. The soap is given in pills, capsules, keratinized pills, or powdered and mixed with sugar and flavored. Senator has used soap in this manner in diabetes, phthisis, obstructive jaundice, cirrhosis of the liver, carcinoma of the stomach, and similar diseases, either of a wasting character or where a deficiency of biliary or pancreatic secretion interfered with the normal digestion of fat. He compares soaps to artificial peptones: the former are pre-digested fats, as the latter are predigested proteids. They relieve the overworked or weak digestive organs by supplying the required nutriment in a form ready for absorption.—*Philadelphia Medical Times, June 11, 1887.*

Strophanthus in Heart Disease.

J. Hutchison, M. D., Glasgow.—A woman, æt. 45, in whom the prominent symptoms were harsh, hacking cough occurring in paroxysms, dyspnœa, and even at times orthopnœa, palpitation, and œdema of feet and legs. The pulse was intermittent, with a regular irregularity, and beating 90 to the minute. Strophanthus was given in half-drop doses at first, and was gradually increased until she was taking 2 minims three times a day. Almost from the first dose taken an alteration in the sufferings of the patient was observed. The heart-sounds were firmer and steadier; the pulse-beats, though still irregular, were not so fast; cough was much less troublesome, and the palpitation was neither so frequent nor so violent. Along with this there was a copious increase in the renal secretion, which soon relieved both the visceral engorgement and the œdema in the feet and legs. In 14 days she felt so well as to be able to return to her house-

hold duties. In another case of mitral disease the symptoms were much the same, but not nearly so severe. The same dose was given, and the effect was as satisfactory and rapid. A case of aortic stenosis in an old lady, æt. 60, who had for years been a martyr to chronic cough, palpitation, and the other symptoms attendant upon stenosis of the aortic orifice, received great relief from a one-minim dose of the drug. In this case palpitation was very violent, the pulse was rapid, and there was extensive passive congestion of both lungs. Œdema of the feet and legs was also present in a marked degree. Under the influence of strophanthus the pulse became slower and firmer, the congestion in the lungs lessened day by day, and a copious diuresis soon made an alteration in the œdema. The palpitation was trifling compared to what she previously suffered, and her cough was much relieved. In nine other cases in which I administered the drug I could find no trace of a murmur, and the purpose for which the medicine was administered was to allay in some measure the turbulent palpitation of which these people complained. In seven of these cases the palpitation seemed to be dependent upon dyspepsia; remedies were given for that condition. Strophanthus was also used in the hope of its exerting a calming and steadying influence upon the heart, which in all of them it succeeded in doing. The remaining two were cases of disordered innervation. The pulse was very rapid and irregular, the heart's action turbulent—so much so that at times the sounds could not be differentiated, but seemed all merged in a confused rumble. Both of these patients were much benefited, and though the symptom of which they complained the loudest—namely, palpitation—is not banished, they find that it can be kept within reasonable bounds by a timely dose of strophanthus. All the patients expressed the opinion that the drug had a stimulating effect, which, however, soon wore off. Some of them professed to feel beneficial effects ten minutes after taking their appointed dose. The effect of the medicine was rapid, but did not remain long, and at the end of three or four hours required to be renewed. I have never seen sickness or gastric irritation produced, such as we meet with sometimes after digitalis. The preparation I used was tincture of the strength of 1 in 8.—*Brit. Med. Jour.*, *May 7.*

Turpentine in Specific Iritis.

Jabez Hogg.—Specific parenchymatous iritis is, at the best, of a somewhat intractable nature. The duration of the disease may extend to weeks, months, and even years, stubbornly resisting all well-recognized methods of treatment. J. W., a commercial traveler, during the severe weather of the winter of 1885 and 1886, was suddenly seized with pain in the right eye. When he called upon me his eye was much congested; photophobia was accompanied by a continuous lachrymation, which produced great irritation of the surrounding parts. The stabbing pain, before confined to the eyeball, had extended over the orbital region, and so far as corneal opacity permitted me to judge of the state of the pupil—a pathological condition, by the way, indicative of the acute processes which gave rise to it—this was much contracted, and the iris appeared to be of a dull green color. Calomel and opium, together with hot fomentations of belladonna, were prescribed. Finding no amelioration, I substituted potassium iodide and bromide for the calomel, and an inunction of a 10% oleate of mercury with very considerable benefit, but unfortunately a few days' exposure suffloed to

bring about not only a relapse, but also an inflammatory attack in the left eye. He consulted a provincial ophthalmic surgeon, who prescribed blue pill and opium three times a day, together with the inunction of strong mercurial ointment, and a frequent instillation of liquor atropia. The pain and lachrymation seeming to increase, on the third day it become intolerable. I saw him the same day. The lids were œdematous, and the eye-ball very tender to the touch. The superficial vessels were much congested. This I attributed in a great measure to the constant use of the atropine, as I have seen œdema of the lids and conjunctival irritation produced in a number of cases by this drug. The blue pill and atropine were stopped, and ammonium iodide in decoction of bark was given in full doses. In the course of the week, as no improvement had taken place, and as the catarrhal discharge from the conjunctiva was the cause of serious discomfort, I substituted perchloride of mercury in full doses for the iodide and bark, and an alum collyrium to wash away the discharge. A marked improvement followed, and in a couple of weeks, as my patient was doing well, he resumed duty. A week or two passed in comparative comfort, and then a smart relapse occurred; on this occasion it partook of even a more severe character, and was accompanied by a considerable amount of bodily prostration. This condition of things lasted month after month, rarely a week passing over without a recurrence of a painful inflammatory attack. The iritis had now arrived at a stage when it may be said to have exhausted the healing art; I was therefore by no means surprised to find a provincial surgeon proposing to have recourse to an iridectomy, but this the patient refused to assent to. The inflammatory nature of the disease showed no disposition whatever to wear itself out, and the serous exudations in the pupils, together with the corneal opacities, had already reduced vision to a quantitative amount. It was at this critical period, and after eight months of almost continuous suffering, that I resolved to give spirits of turpentine. The late M. Carmichael, of Dublin, was the first to employ turpentine in syphilitic iritis, as well as in deep-seated inflammations of the eye, and he found it of unquestionable value. The turpentine was prescribed in half-drachm doses, suspended in acacia emulsion, to be taken three times a day after meals. For the first week the inunction of a 20% oleate of mercury was freely employed, but this was laid aside, and for four months the turpentine alone steadily persevered in, and with the happiest and most unlooked for results; for not only has my patient's general health greatly improved, but the corneal opacities as well as the iritis have gradually disappeared. The serous exudations thrown out during the progress of the disease are in the course of absorption, and vision is very nearly equal [he reads No. 2 test types, pearl, without glasses] to what it was before the first inflammatory attack occurred, now nearly 14 months ago.—*Med. Press, Lond., April 27.*

On the Action of Hydrochlorate of Hyoscine.—*Arch. f. exp. Path und Pharm., XXII., Hft. 6, March, 1887.*

Under the direction of KOBERT, Sohrt has made a series of experiments on the physiological action and therapeutic use of hyoscine, the results of which are published in the above paper. The conclusions arrived at by Wood, as to the manner in which hyoscine influences the various organs, are to a large extent

confirmed, but on some points the views of the American and German observers are not in accord.

In healthy men the injection of $\frac{1}{75}$ of a grain gave rise, according to the latter, to disturbances of co-ordination and some muscular weakness; the head felt heavy, sank on the shoulder, and could only be lifted up with difficulty; the limbs likewise felt heavy, and the upper eyelid could hardly be raised; there was a sense of fulness of the head, the pupils were dilated, and a tendency to sleep was noticed in every case; the throat was dry. The hallucinations, delirium, nausea and trembling which have been described by Wood and other observers as following the administration of the hydrobromate and hydriodate of hyoscine, were not observed by Sohrt and Kobert.

Hyoscine, according to Kobert, even in large doses, is well borne by some of the lower animals; a cat recovered after nine grains, and a small rabbit was unaffected by three grains. After large doses it is excreted unchanged by the kidneys. It influences but little the cerebral functions of the lower animals, but has a markedly calming effect on man when the brain is excited. The depression of the reflex excitability of the spinal cord, which, according to Wood, was present in lower animals after the administration of hydrobromate, was not observed in the experiments made by Sohrt.

Claussen, who published his investigations on the action of hyoscine in 1883, stated that this drug stimulates the vagus and decreases the heart's frequency. Wood concluded that it had no influence on the vagus. Kobert, however, is of opinion that it paralyzes the vagus terminations in the lower animals, and probably also in man. In a lunatic with depressed circulation, which he attributed to inhibition exerted by the brain on the heart, he found that hyoscine always improved the pulse. In healthy men, however, increased rapidity of the pulse, which ought to follow vagus paralysis, was not always noticed. It antagonizes the influence of muscarin on the heart. In cold and warm blooded animals it dilates the peripheral vessels, probably by its paralyzing influence on the ganglia contained in their walls. Kobert does not think that it influences the vaso-motor centre, as the experiments of Wood led him to believe. The respiration is unaffected, according to Kobert, while Wood considers that this drug has a depressing influence on the respiratory functions, acting in all probabilty on the respiratory centres.

Hyoscine certainly diminishes the secretion of saliva, hence the drying of the throat which follows its use. The secretion of perspiration, too, is lessened, and some of Sohrt's patients who tried both hyoscine and atropine to check sweating preferred the former drug.

It is well known that muscarin increases intestinal peristalsis; hyoscine antagonizes this influence, paralyzing therefore the nerve apparatus on which the muscarin acts.

According to Dr. Emmert, of Berne, hyoscine acts more energetically and rapidly as a mydriatic than either atropine or duboisin, and is effective even in solution of 1 part to 1000. Kobert, however, states that complete dilatation of the pupil is only produced by full doses. It acts, he says, by paralyzing the periphery of the oculo-motor nerve. Sohrt found that $\frac{1}{170}$ of a grain dilated his pupils without paralyzing accommodation. Sohrt gave subcutaneously from $\frac{1}{75}$ to $\frac{1}{10}$

of a grain to a number of lunatics suffering from mental excitement and insomnia, who had taken other calmatives in vain. He administered the drug about 100 times. Sleep was always produced, and no threatening symptoms were noticed.

As a rule the patients fell asleep in 10 to 15 minutes after the injections, and did not awake for five to eight hours. A little fulness of the head was at times complained of during the morning following an injection. It is specially worthy of remark that the hyoscine produced good results in several cases in which hyoscyamine in full doses had been ineffectual. Kobert is inclined to consider hyoscine beneficial as a sedative in mental diseases only.—*Medical Chronicle.*

Treatment of Erysipelas.

Robert Pollok, M. D.—The treatment of erysipelas is most varied, nearly every practitioner who sees much of this affection having formulated a certain line of action for himself. This arises to some extent, I think, from the fact that simple erysipelas has a tendency to subside spontaneously in about five or six days, and often the treatment adopted obtains the credit while nature does the work. I am of opinion that the treatment must depend upon the type of the disease. In all the cases I have seen, the treatment demanded was a stimulating one. I refer to simple general erysipelas. But in localized erysipelas affecting the throat, ear and pharynx, aconite in small doses, frequently repeated, as recommended by Ringer, has been productive of the happiest effects when administered at the beginning of the attack. I will take as a typical example of simple cutaneous erysipelas that form which we so commonly see, commencing over the root of the nose, and spreading over the face and forehead. In such cases, I immediately begin the administration of 20 to 30 minims of tinct. ferri mur. (diluted of course with water) every two hours; and as a protective and palliative, I use:

℞. Gutta percha . . . . . ʒij.
Chlorof. meth. . . . . ℥ij. solve.
Zinc. oleati. . . . . ʒij.
Iodoformi . . . . . ʒss. M.
Sig.—To be painted over the part affected.

The advantage of this preparation over the powdered starch, zinc, or flour, is its comeliness. Of course previously to applying this preparation, I have the parts carefully washed with tepid water, and often when there is much pain I use the decoction of poppy-heads as a fomentation. This treatment usually effects an amelioration of the symptoms, and the disease subsides. But in some cases the course of the disease does not stop here, it runs riot all over the head and neck, and the medicinal treatment then pursued is ammonia, bark, iron, and quinine, with perhaps a grain of solid opium to obtain rest. I am happy to state that I have never lost a case of erysipelas, although the duration and severity of the complaint have varied much. The *rationale* of the local application above mentioned must be purely protective and palliative, by excluding the irritating effects of the cold air, and not by excluding specific germs. The latest researches prove that the schizomycetes or streptococcus erysipelatosus is anærobic, or flourishes where air is excluded, living in and upon the tissues affected. I may note the many methods of treatment recommended, such as compression, or ligatures applied

above the seat of the affection, advocated by Velpeau; the application of a solution of nitrate of silver in the form of a ring around the redness (Higginbotham's method); the application of tincture of iodine, white paint, solutions of tannin, silicate of soda, used by Alvarenga of Lisbon; the subcutaneous injection of carbolic acid or salicylic acid directly into the part, and the internal administration of quinine in large doses, or salicylate of ammonium, suggested by Dr. Barclay of St. George's Hospital. These may all be good, but so satisfactory have been the results by the iron and the antiseptic anodyne externally applied, that I have had no reason to depart from that treatment. I earnestly look after the hygienic surroundings of the patient, and give eggs, milk, beef tea, and other stimulaing and light diet. The disease may, however, pass into a stage when surgical treatment must be adopted. If simple bullæ or vesicles form I relieve the tension by evacuating them, and dress the surface with tartrate of potash and iron lotion in the strength of 10 grains to the ounce of water. When sloughing and suppuration take place I make free incisions; the pus and sloughs thus obtain a free exit; the separation of the mortified parts may be accelerated by the scissors. I then apply an antiseptic solution by means of the syringe or douche, dry the parts thoroughly, and dress with sublimated wood-wool. The best antiseptic lotion is corrosive sublimate one grain in five ounces of water, or nearly in the proportion of 1 to 2,000. Koch's solution, as it is now called, is the same as the old "M'Kenzie's collyrium." An important point which should not be overlooked in the treatment of erysipelas as well as in so many other affections, is the effectual clearance of the *prima via* by a good purge, administered at the commencement of the attack. If erysipelas assume a typhoid form, alcoholic stimulants are strongly indicated. Infantile erysipelas I treat on the general lines laid down, although the tincture of iron is not so admissible, owing to its griping tendency; acetate of iron is less irritating. When erysipelas commences in the the throat, inhalation, or the steam atomizer, with some antiseptic, should be used. I watch carefully for œdema glottidis. If it does occur, tracheotomy is the only resource.—*Glasgow Medical Journal, May.*

Recovery after Taking Fifty-One Grains of Morphine.

May 25th, M. C., aged thirty-two years, was found at ten minutes past twelve, in his room, on the bed, unconscious. Dr. FRENCH was called, who sent for me, with the request that I would come immediately, and bring a stomach-pump. I arrived at the house at about 1 o'clock, p. m. We found the patient, a strong, well-built man, dressed with the utmost care and nicety, lying on the bed, which had not been slept in, unconscious, sweating profusely; pupils contracted to a pin's point; respiration very irregular, abdominal; lips purple, face cyanotic. On the table was found a bottle with Power's and Weightman's red label, containing, by weight, nine grains of morphine: in a goblet by side of bed, about two drachms of water, which tasted like a solution of morphine; also a sealed letter, directed to patient's wife, marked "Deliver immediately—death." The bottle was apparently a new bottle, fresh from the apothecary; the tin-foil had not been entirely removed from the cork. In a vessel under the bed was found, as we judged, about two ounces of greenish fluid, containing food, the green color given, apparently, by garden-rhubarb. A lamp was burning in the room, indi-

cating that the patient had been on the bed many hours. The lamp would ordinarily burn for twelve or fourteen hours; the oil was nearly exhausted.

The diagnosis was easily made out—namely, attempted suicide by the use of morphine, taken sometime during the previous night. Attempts, which were ineffectual, had been made by Dr. French to make him swallow coffee. He had also administered atropine hypodermically. While getting my stomach-pump ready, one-thirtieth of a grain of atropine was injected. At 1:15 p. m., I removed ten ounces of fluid, in appearance like the liquid found in the vessel, pumped back sixteen ounces of warm water, which I removed, and injected another pint of water, and removed that also. Having thoroughly rinsed out the stomach, I pumped in a pint of very strong black coffee. Flagellation of the face with a wet towel, and of the nates with a small cane, was kept up until a galvanic battery was obtained, one pole of which was applied to the epigastrium, and the other to the carotid triangle.

2:30 p. m.—Pupils dilated a little; respiration improved; patient not so cyanotic. Flagellation caused corrugation of the superciliary and orbicularis muscles.

3:30 p. m.—Patient very purple, entirely unconscious; pulse 140, respirations three per minute. We gave ten grains of caffeine. Galvanism was continued; the negative pole applied to lips and carotid triangle alternately.

5 p. m.—Respiration improved; Cheyne-Stokes in character.

5:30 p. m.—Caffeine, ten grains; galvanism continued.

6 p. m.—Pulse 148, respirations twenty per minute.

9 p. m.—Patient could be made to open eyes by shouting, shaking, and by applying the cane with considerable force to the nates. Caffeine every three hours; also galvanism intermittently.

2 a. m.—Nurse said he waked up and became conscious.

9 a. m.—Patient seemed quite conscious, but said his head felt light; vomited, and in the afternoon was quite delirious, saw snakes, etc.

He was well the next day, and gave this account of himself: At 11 p. m., May 25th, he put one-half the contents of an eight-ounce bottle of morphine into a goblet of water, and drank it; filled the goblet with water and put more morphine in it, and drank of it occasionally until he became unconscious. The last drink he took made him sick, and he vomited once—what we found in the vessel.

There were nine grains found in the bottle, showing that he had taken fifty-one grains, and he said he wasted only what he vomited, and which we found in the vessel. According to his account, he drank about twelve ounces of water, in which were dissolved fifty-one grains of morphine. He vomited two ounces, so that there must have remained in his stomach for more than twelve hours more than forty grains of morphine.

It is to be regretted that no attempt was made to ascertain the amount of morphine pumped out, but, in the hurry and confusion, the whole was thrown away. The points of interest in this case are the large amount of morphine taken, the length of time it remained in the stomach before any attempt was made to remove or antagonize its effects, and lastly, the success of the treatment, namely, the stomach-pump, atropine, caffeine, galvanism, and flagellation.

This case, together with the case reported from Denver by Dr. Fisk, shows

that however desperate the case may seem to be, however large the amount taken, or the length of time before treatment is commenced, persistent endeavors to relieve the patient should continue so long as respiration can be kept up by the use of galvanism and flagellation. In short, every effort should be made to keep the patient alive until the poison has spent its force, or has been antagonized by the atropine and caffeine.—*Dr. Geo. M. Morse, in the Boston Med. and Surg. Journal, June 23, 1887.*

The Diuretic Action of Mercurial Preparations.

The diuretic action of calomel, known to the older physicians, has been, as the readers of the *Gazette* are familiar, again brought to the attention of practitioners, and we have published testimony from a number of different observers, which indicates that under certain circumstances calomel is one of the most active diuretics that we possess.

That this diuretic action is not peculiar to calomel, as has been claimed by a number of writers, but is also, though perhaps to a less degree, possessed by other mercurial preparations, has been brought into prominence by Dr. Rosenheim in a paper read before a recent meeting of the Verein für Innere Medicin of Berlin (*Therapeutische Monatshefte, April, 1887*).

The author employed corrosive sublimate, yellow iodide of mercury, and the amidato-bichloride in amounts of from 1½ to 2 grains given daily. These preparations of mercury also proved themselves active diuretics in these large doses, but they produced more irritation in the intestinal canal than calomel, and also fell behind calomel in the degree of diuresis. On the other hand, the stomatitis produced by these mercurial preparations was but slight. Diuresis only follows when large doses of some mercurial preparation are rapidly absorbed, seemingly indicating that the production of diuresis is due to the acute mercurialization of the organism. The correctness of this view is rendered more probable by the large amounts of mercury which are excreted through the urine.

Dr. Rosenheim's experiments with calomel still further strengthen its position as a diuretic. He employed it in sixteen cases of heart-disease complicated by dropsies, in several of which kidney complications were also present. In nine of these cases a prompt diuresis and disappearance of the œdema followed the use of calomel. In four its action was but moderately successful, and in three it entirely failed. It is worthy of notice that in all these cases before calomel was administered digitalis had been tried and proved inefficacious. Since it has been found that calomel has no direct action either on the heart or kidneys, kidney-disease offers no contra-indication to the use of calomel for the purpose of producing diuresis. In fact, Dr. Rosenheim has employed calomel for this purpose in purely nephritic dropsy. It is true that the results, however, were unfavorable. In the greater number of patients to whom calomel was administered a more or less severe stomatitis was produced, and in nearly all cases diarrhœa.

In the discussion which followed the reading of Dr. Rosenheim's paper, Dr. Leyden reported that he had treated three cases of cirrhosis of the liver with calomel. In one failure had resulted, in one marked but temporary relief, and in one a permanent amelioration.

In the treatment of dropsy from heart-disease, he regarded calomel as a valuable contribution to our therapeutic measures.

Fürbinger, on the other hand, claimed that the diuresis produced by calomel, although perhaps occurring in a high degree, was invariably ephemeral, and he regarded its mode of reduction as dependent upon a direct action on the glandular epithelium of the kidney, since calomel never acted as a diuretic in œdema dependent upon previous parenchymatous nephritis.

Dr. E. Biró, of Budapesth, has also confirmed the general experience of others as to the marked diuresis which follows the use of calomel, and although in his practice stomatitis, colic, and diarrhœa were frequently produced, he regards these complications of but little moment in view of the powerful action of the remedy. He has found that the degree of diuresis depends upon the intensity of the œdema, and he relates one case of mitral insufficiency in which the amount of urine was increased on the fifth day from eight hundred to six thousand eight hundred cubic centimetres. For the stomatitis, which is at the worst merely transient, he recommends a mouth-wash of potassium chlorate, and small doses of opium powder for the diarrhœa and colic.

Terray (*Pest. med. chir. Press*, 1886) and Weinstein (*Wien. med. Blätt.*, 1887, No. 7, p. 206), whilst affirming the diuretic effects of calomel, as reported in the *Medical Chronicle*, May 1887, draw attention to the evils which may follow its administration. Terray states stomatitis occurred in all his cases, and its intensity seemed directly proportional to the diuresis.

Weinstein records a marked increase in the excretion of urine in four cases of pleural effusion, two cases of cirrhosis of the liver, and one case of Bright's disease. But he found great evils arise from the administration of calomel as a diuretic, profuse diarrhœa, stomatitis, and salivation sometimes occurring after even small doses. The diuretic influence of the drug, he says, is not of long duration, and he recommends it chiefly in ailments which have run their acute course, leaving œdema behind them, and in those where the mercurial itself is likely to exercise a beneficial effect, *e. g.*, in pleural exudations.—*Therapeutic Gazette, June 15, 1885.*

Therapeutics of Hay Fever.

The first plan of treatment to prevent or cure hay fever was by allaying the pathological irritability. That was the object he had endeavored to achieve when he began his experiments. From trials extending over several years no remedies of this kind, except aconitine and atropine, returned results of value, and the results, such as they were, were insignificant, and the effects following their use were so disagreeable and inconvenient, that he had abandoned his inquiries in that direction. The introduction of cocaine, however, and its recent employment in the treatment of hay fever, induced him to reopen his experiments. At present his success was considerable—three out of five cases were immediately relieved, and the relief was maintained by frequent renewal of the application. Last year, however, as his experience increased his success diminished. Although its success has been overrated, and although the frequency of the application was troublesome, and though its use was not free from inconvenience, he was of opinion that its success was such as to justify further observations.

There were three ways of using cocaine—as a solution, as a spray, and in the form of a bougie. Personally, he preferred a solution of from 5 to 15 per cent., applied to the interior of the nose with a laryngeal brush. The cocaine bougies contained each from one-fourth to a grain of the drug.

He then came to the second plan, which was the one he himself had tried, and the one which, with occasional exceptions, he still adhered to. Its object, which did not exclude constitutional treatment, was to subdue the irritability to such an extent that the mucous membrane would not react to special or common irritants in a pathological manner. He had tried various agents, such as the active principle of mustard, capsicum, horseradish, but at last had chosen carbolic acid, to which he subsequently added quinine, and lately perchloride of mercury. The formula which he now used was gly. acid. carbol. P. B. ʒj., quiniæ muriat. ʒj., together with 1-2000 of its weight of corrosive sublimate.

He then alluded to the constitutional treatment, so that it might not be said to have been overlooked. He always gave persons a constitutional treatment. He rectified any defects in their manner of living, and placed them on simple but liberal diet, restricting alcohol, and insisting on exercise. The functions of the skin and bowels had also to be attended to. After that he proceeded, if there was room, to the use of drugs. He generally gave as "stiff tonic," Easton's syrup, ʒj. with a few drops of solution of hydrochlorate of arsenic in an ounce of water. When this disagreed, he gave simple quinine with strychine and arsenic. When patients were not only low, but nervous, he substituted iron in union with bromides, nux vomica, and arsenic.

To employ the solution, the composition of which he had given, a brush or two, such as he held in his hand, was all that would be required. The mucus in the nostril should be cleared out, and the brush dipped in, but not too much charged with, the solution, was passed first up as high as it would go, then withdrawn, recharged and reversed. It should be turned round so as to come into contact with as much surface of mucous membrane as possible. Both nostrils should be treated thus. A napkin should be near at hand to wipe away any carbolic acid which may have oozed out of the nostrils. In some cases it was desirable to pass the brush (or rather a fresh one) up behind the soft palate, and move it about so as to apply it to the whole interior of the pharynx, and particularly to the back of the soft palate.

The immediate effects of these manœuvres differ in different persons, but are always disagreeable. They lasted from half an hour to half a day. After a little time, even in the best cases, the nose swells, the eyes beome injected, and the patient feels odd sensations in the forehead, ears, and palate, and a slight attack of fever follows. It was not always as bad as this, but he mentioned it in order to emphasize a caution he was about to give, that before submitting a patient to this treatment, he should be warned of the disagreeable effects and these should not be minimized, otherwise the patient would exaggerate his sufferings and unfairly reproach his doctor. Sometimes a single application was sufficient to prevent another attack for a whole season, and in four cases the paroxysm had never returned. Usually two or three applications were necessary to ensure success. The length of the interval between the applications would depend on the effect produced. If mild, then the application might be repeated on alternate days.

He was unable to give any very accurate data as to the success of this treatment. Patients when relieved seldom returned, and when unrelieved never returned. He had only been able to obtain information as to about one-third of the patients; half of them had been cured for a season, and four were cured for good. This result, it was true, was nothing to boast of, but compared with other methods, not excepting the cocaine treatment, it has its value. The success, small as it was, was not to be despised. He claimed the indulgence of the society for his communication as an honest if humble attempt to push pathology into practice, and to take away, or rather help to take away, the reproach which had been unjustly cast upon them of ignoring or repudiating the natural and just alliance which should unite in the closet relationship the art with the science of medicine. SIR ANDREW CLARK, *in the Cavendish Lecture of June 3, 1887.*

The Therapeutic Uses of Carduus Marianus—Mary Thistle.

Mary thistle (*Carduus Marianus*) formerly enjoyed a considerable reputation, especially in Germany, where the leaves were used against dysentery and hemorrhage, and the seeds in the treatment of spleen and liver enlargement. The discredit and disuse into which it has fallen is difficult to explain, since there is indubitable evidence that it possesses decided therapeutic virtues. The fate, however, that has befallen other drugs overtook this for a time, and its return to professional favor is again beginning to show itself, especially in France, where Tripier is prescribing both the tincture and also the alcoholic extract, combined with aloes, for constipation. Aloes alone, in the quantity given, would be useless against constipation, and, as is well known, it has a tendency to produce piles, but when combined with the Mary Thistle extract it stimulates the liver, and the excessive secretion of bile resulting therefrom produces the desired effect.—*Philadelphia Medical and Surgical Reporter.*

The natural order compositæ had been searched again and again for medicinal plants of marked therapeutic value; the old doctrine of symbols pointed to some of them as useful, and to this was added the superstitious legend that attached to many of them, and especially to the thistle tribe, unusual virtues. The plants of the thistle family most used were the Blessed Thistle (*Carduus Benedictus*), which obtained its name from its supposed extraordinary virtues. It occupied a place in the London, Dublin, and Edinburgh Pharmacopœias. Certainly had it possessed a tithe of the virtues with which it was credited, no more useful plant could have been cultivated.

The plant was introduced into this country from Spain and the Levant. It was cultivated by John Girarde, and is mentioned in his "Herball," published in 1597. Woodville published a hand-painting from nature of the plant on the 18th September, 1790, and in Lewis' "Experimental History of Materia Medica," folio edition, p. 182, there is an excellent summary of its medicinal properties. He says, "I have frequently observed excellent effect from a light infusion of carduus in weakness of appetite and indigestion, where the stomach has been injured by irregularities or viscid phlegm." Matthiol, however, is more ardent in his praises; he considered it to be "a very powerful alexipharmic," though many alexipharmics formerly considered of great value have not the same high repute now. I am tempted to quote Browne ("Vulgar Errors," 1646): "Some antidotal qual-

ity it may have, since not only the bone in the hart, but the horn of the deer, is alexipharmic." It was credited with being capable of curing the plague, and other fevers of the most malignant kind. Applied externally, it cured carious bones and healed cancers (Arnold de Villa Nova). Bergius reports it useful in anorexias, cachexia, cephalalgia, arthritis, et febvres intermittentes. The warm infusion or decoction acted as an emetic.

The leaves are recommended to be gathered in June, when the plant is beginning to flower.

Mr. Gray, in 1818, thus summarizes its action, "Root diuretic, deobstruent, lithontriptic, leaves alexiterial in infusion; seeds diaphoretic." Almost similar views were published by Lindley in 1848, and Mr. Burnett says, "Its properties are such as to lead us to a belief that it has been superseded by other not more efficacious remedies."

The *Carduus Marianus* differs little in its action from the *C. Benedictus*, and both appear to have fallen into disrepute. At the beginning of the century, in 1808, Pearson, one of our ablest writers, says: "Blessed thistle—as a bitter and stomachic not at all preferable to chamomile, buckbean, or quassy; and therefore may be rejected. Yet it has been dignified with the pompous title of *asylum languentium, medicina patrum familias polycresta, verusque pauperum thesaurus.*" Did the pompous titles bias Pearson against the plant? Andrew Duncan, "Edinburgh Dispensatory," 1804, very fully describes the *C. Benedictus*, and gives Neumann's analysis, and expresses regret that "the virtues of this plant seem to be so little known in the present practice." (Was it in answer to this that Pearson wrote?) Whilst he thus eulogizes the *C. Benedictus*, he gives only one word to the properties of the *C. Marianus*, "Emulsive." Gray and Lindley both speak of the *C. Marianus* as "pectoral, antipleuritic, aperitive." It is common on Wimbledon Common, flowers in July with a purple blossom (Lindley). It is found about Ediaburgh "growing on banks and waste places; is a perennial, with a stem from 3 to 5 feet high. Distinguished at once by the white veins on its leaves, and the great re-curved scales of the involucre. A drop of the Virgin Mary's milk was said to have produced these veins" (Hooker). In Morris and Kendrick's "Medical Dictionary," 1807, four-ounce doses of the fresh juice of the leaves of the *C. Marianus* are recommended for dropsy, and the oil obtained from the seeds is said to be relaxant.

In the U. S. Dispensatory both plants have a place. Of the *C. Benedictus* the authors state that the active constituents of the *Benedictus* are a volatile oil and a peculiar principle for which the name *cnicin* has been proposed. This is crystallizable, inodorous, very bitter, neutral, scarcely soluble in cold water, more so in hot, freely soluble in alcohol. Its formula is $C_{42}H_{30}O_{14}$. In doses of four or five grains, it is said often to vomit, and that in eight-grain doses, it is useful in intermittent fevers. The drug may be so given as to be tonic, diaphoretic, or emetic. The plant has, in fact, been tried in almost every country in the world, and though favorable opinions of its value in the past are not wanting, still the general neglect into which it has fallen tells that it not unfrequently disappoints the prescriber.—*George Joy, F. R. C. S., in The Medical Press, May 25, 1887.*

Treatment of Uterine and Peri-Uterine Affections by the Electro-Therapeutic Method of Dr. Apostoli.

GEORGE ELDER, M. D., Surgeon Samaritan Hospital for Women, Nottingham, writes in the *British Medical Journal*, June 11, 1887:

For some time past my attention has been directed to the treatment more especially of uterine myoma by electrolysis, and most of the literature on this subject is known to me; but the manner of its use seemed not only so imperfect and uncertain, but also dangerous, that I hesitated to adopt the practice until the reading of a recent pamphlet on the treatment of endometritis by the galvano-caustic, as perfected by Apostoli, threw a new and more hopeful light upon the subject.

Dr. Webb's letter in your issue of May 7th stimulated my curiosity still further, and accordingly I went to Paris and attended Dr. Apostoli's *clinique* on two days, and will very briefly state what I saw.

1. Case of a woman, aged 41 years, who had been under treatment for a rapidly-growing soft myoma, which condensed and diminished in size after four galvano-positive applications. The floodings and pelvic pains had also ceased, and now the patient is under treatment for a form of heart-disease.

2. First visit of a woman with a myoma, who had metrorrhagia continuously for four months. The uterine cavity measured four inches. Galvano-positive cauterization was applied for five minutes, and two days afterwards she stated that the hemorrhage had ceased the same evening.

3. A patient who had been under treatment for some time with an interstitial myoma in the posterior wall with the usual symptoms, and which had been diminished quite two-thirds. Several galvano-punctures into the growth from the vagina had been made, and whereas, prior to beginning the treatment, she had been unable to work, and, as she expressed herself, only existed, now, and even the day after a puncture, she follows her occupation of a washerwoman, and lives.

4. A case of myoma reaching up to the umbilicus in a woman aged 31 years, and who has had, since November, 1886, nine galvano-negative punctures. The last had caused some degree of suppuration and feverishness, but not sufficient to lay the patient up. The growth is diminishing, and the local discomforts ceasing, whilst *pari passu* there has been improved general health.

5. An instance of endometritis with metrorrhagia of two months' duration, under treatment since May 12th. The first galvano-positive cauterization had relieved her, and now, after the third *séance*, there remains only a slight brownish staining of the discharge.

6. A case which originally had been under treatment for right parametritis, and which galvano-negative puncturing had cured. Now she comes complaining of what seems to be an enlarged and cystic ovary, but as it is not the seat of much discomfort, nothing is done.

7. A case of perimetritic exudation, which had been punctured thrice, with the result of resolving most of the thickening, but as there is still a considerable amount of pain, faradization is now being used for its relief successfully.

8. A patient who had been under treatment four years ago with a myoma ac-

companied by much hæmorrhage. The tumor had, under treatment, all but disappeared, and the menstrual flow is now normal.

9. Examined a case where there had been general parametritis fixing uterus. Eight galvano-negative punctures had effected resolution of this mass.

10. The only case in which anæsthesia was used, was this of a woman aged 51 years, suffering from a large myoma. A galvano-negative puncture was made into the growth, and a current with the intensity of 220 milliampères used for 5 minutes.

11. A new case of a young woman with a soft, rapidly-growing interstitial myoma, brought by her medical attendant. A galvano-negative puncture was made, and an intensity of 100 milliampères used for 5 minutes, which is average duration.

12. An instance of a bleeding myoma in a woman aged 49 years, who before coming to the *clinique* had had the usual treatment by drugs for eighteen months without effect, and been unable to work; has had six punctures. Hæmorrhage began to abate after the first. Now the flow is regular, lasting only two days, and she is able to work as a washerwoman.

13. A case of right ovaralgia, who had been under other treatment for fourteen months without benefit, is being cured by faradization.

14. A case of metritis with constant bloody discharges for two months after an abortion, when three galvano-positive cauterizations had stopped hæmorrhage, and now she comes from time to time to verify condition.

The above, although not including all the cases Dr. Apostoli showed me, gives an accurate idea of the kind of cases under treatment and benefiting by its application.

What impressed me most favorably was the extreme care taken to record faithfully the histories and nature of the cases, with the subsequent results of the treatment upon them, and in all of the patients an opportunty was given of verifying the diagnosis.

With the exception of the instance above noted, no anæsthetic was used; in fact, nothing but a very transient discomfort seemed to be felt by the patients even when a puncture was made; and the majority of them, after waiting a few minutes, dressed and left the dispensary, evidently unaffected by the application.

Dr. Apostoli stated that in no case had any serious consequence followed the method—a result, I think, to be attributed partly to his attention to thorough anantisepsis, and also to his making the tolerance of the patient the measure of the strength of the appication.

To my mind this treatment opens up a hitherto neglected and very hopeful era in the therapeusis of uterine diseases, which is now only beginning to receive a full measure of recognition by gynæcologists.

Dr. Apostoli has had a considerable number of American visitors, some of whom, since their return to their own country, have carried out the treatment with gratifying success; and during my own visit Mr. Skene Keith and Dr. Philip, of Edinburgh, shared with me in the valuable lessons the cases taught.

My thanks are due, first, to Dr. Apostoli for the courtesy which he showed me; and, secondly, to Dr. Webb, through whom my visit to Paris was made.

The Therapeutic Uses of Cocaine.

The value of coca preparations for internal administration is so positively assured by a large number of definite experiments in different clinics, that the practitioner can no longer refuse to admit the important service to be derived from it when given in response to definite indications. As an analeptic or restorative agent, it has been long known, whilst more recently it has been recognized as an excellent stomachic tonic, and has, for example, been recommended by Professor POTT, of Halle, as a remedy for the enervating diarrhœa of children. He claims the most brilliant results from the use of the alcoholic tincture of coca leaves for this purpose. Of much greater significance, however, seems to be the therapeutic effect of cocaine as an antispasmodic, a fact that has been established by Pott and others in cases of epilepsy, eclampsia, spasm of the glottis, pertussis and chorea. It therefore seems opportune to add to the results some further observations of the successful application of cocaine in the practice of the writer to cases of whooping cough, neuralgia of the stomach, and bronchial asthma.

I. COCAINE IN CASES OF WHOOPING COUGH.

During the past summer I made the experiment of the application of cocaine in twelve cases of whooping cough in children from 1 to 7 years of age, that had been sent to the Sanitary Institution of Colberg. At first I tried the commonly recommended practice of touching, several times a day, the posterior wall of the pharynx and the epiglottis with a 10 per cent. solution of the drug. But no good effects at all followed this; indeed, the mechanical irritation of the brush produced, on the contrary, the most violent paroxyms of coughing on the part of the struggling little patients. I therefore ordered instead a one per cent. solution (gr. iss. to ʒiiss. aquæ amygdal. am.) for internal administration, giving the child, according to its age, gtt. 10–15–20, three to four times daily in a lump of hard sugar, with the object of keeping the cocaine for a longer time in intimate contact with the pharyngeal walls by chewing than by simply swallowing the liquid. On an average within three days the attacks became much less severe, the nights became more peaceful, the debilitating emesis ceased, and in two to three weeks the persistence of a slight catarrh was all that remained. The children in the fresh sea-breezes and with a few salt-baths quickly regained the most perfect health. Although it is well-known that a change of air, especially a stay at the sea-shore, operates most happily in relieving whooping cough, the author emphasizes his conviction that during no previous summer has he seen the acute stage of the malady so quickly and easily passed through as during the last season, when he adopted the use of cocaine as above described.

II. COCAINE IN GASTRIC NEURALGIA.

The author also reports the very favorable action of the internal administration of the hydrochlorate of cocaine in three case of severe neuralgia of the stomach in young women of 20, 22, and 26 years, in whom there was neither pronounced anæmia, suspicion of gastric ulcer, nor disorder of the genital functions. It was best borne when combined with belladonna in pill form:

℞. Cocain. hydrochlor. . . . . gr. iss.
Extr. Belladon. . . . . gr. viiss.
Extr. Rh. . . . . q. s.
To make 20 pills.
Sig. One pill after meals three times daily.

The first two cases were two sisters of Warschau. They consulted me in August of the previous year because of seizures of violent gastralgia immediately after every surf-bath, although they had suffered from lighter attacks at times before this. Both of the girls, as I have said, had the appearance of enjoying perfect health; there was no trace of anæmia, and all functions in the best order; palpation of the stomach showed no sensitive spots. Several days' use of the cocaine pills gave decided relief. The same formula was used later at their home during the winter, with the same happy result.

In the third patient the gastralgia was combined with hiccough that came on during the night and was extremely tormenting. In this case, it is true, I was unable to put aside entirely the suspicion of hysteria, although the lady seemed in every respect to be healthy and strong. Cocaine in this instance produced its anti-spasmodic effects. Two pills were given at night before going to bed, with the immediate result of bringing better sleep. This with sea-bathing finally effected a complete cure.

III. COCAINE INHALATION IN BRONCHIAL ASTHMA.

I have only one case of bronchial asthma to report, but that one was very accurately studied by me, and cocaine, by inhalation, was used with the most excellent results. To my knowledge it has not previously been used for these indications in the same form. The patient was a solidly-built woman of fifty years from the neighborhood of Colberg. In November of the previous year, after a severe cold, she was one night suddenly seized with what seemed from all appearances to be laryngeal croup. I found her near stifling. Breathing was terribly difficult, all the accessory muscles of respiration in extreme activity, the face livid, the extremities covered with cold sweat, the pulse small and excessively rapid. A powerful emetic fortunately succeeded in speedily bringing out of the larynx and trachea a large mass of tough fibrous membrane, giving her speedy relief. Succeeding this croupous attack followed an obstinate bronchial catarrh lasting several weeks, resulting in frequent and severe asthmatic seizures. Morphine, internally or subcutaneously, soon ceased to afford relief, so that I hit upon the happy thought of trying the inhalation of cocaine. I found it in fact the best remedy, and I do not hesitate most readily to advise its use in like circumstances, when morphine is contraindicated or has failed to produce the desired effect.

In my case I allowed the patient to inhale about ʒv. of a one per cent. solution, by means of one of our common inhalation apparatuses, requiring about five minutes' time when the machine is properly in action. This amount was entirely sufficient the first time to cut short a severe attack. Subsequently the patient learned to begin the inhalation at the commencement of the attack, and then ten or twenty inhalations were sufficient to give instantaneous relief.

Besides, it must be remembered that one cannot inhale much more than this amount without superinducing the known effects of the drug, the contraction of

the vessels of the mucous membrane, the extreme resultant dryness, and an uncomfortable feeling, ending in producing a sensation of tickling in the throat, whilst at the same time, lips, tongue and tonsils show the greatest paleness and insensibility.—*Dr. Weissenberg, in the Allgem. Med. Cent.-Zeitung, April 27, 1887*

The Treatment of Eczema.

Dr. J. M. WINFIELD, of Brooklyn, says, in the *N. Y. Med. Jour., June* 18, 1887:

The diagnosis of eczema is comparatively easy. If we except acne, it is the commonest of all the cutaneous diseases. It includes about one-third of all cases of skin diseases that come under treatment. It seems to be more frequent in this country than abroad, Hebra making it about 16 per cent. of all the cases treated at Vienna. Eczema is remarkably protean in its manifestations, showing itself under the most varied forms; at one time it appears as an erythema, and at another time it takes the vesicular form. Also remember it is the only weeping skin disease—not in the sense that an excoriated surface weeps, but as part of the pathological process of this disease, by an excessive exudation of liquor sanguinis, which cannot be consumed in supplying loss, which remains over and infiltrates the cutaneous structure. The squamous or dry form is often mistaken for psoriasis, a squamous syphilide, etc. Seborrhœa also is often mistaken for eczema. It is true the two diseases often present the same or similar appearances as they occur on the scalp. They do often exist together, or one is the sequel of the other. Eczema of the scalp is, as a rule, seated on a circumscribed spot, while in seborrhœa the scales cover the whole scalp. In cases of doubt, care should be taken to obtain the history, etc., and then a correct diagnosis can easily be made.

In considering the treatment, only an outline can be given. To enter upon the subject more fully would be to furnish subjects for an indefinite number of meetings. Eczema is a perfectly curable disease, provided the cause is sought for and remedied. In the acute form care should be taken not to over-treat. The great tendency is to administer arsenic, and apply a stimulating ointment, and then trust to nature for the cure. If nature had been let alone, or, better, aided by using some bland protective ointment, and a brisk cathartic interally, she would have brought about the cure much sooner than she would when stimulated almost to the point of irritation. We often find eczema accompanying digestive troubles. In these cases the diet should be plain and nutritious, and some tonic be used. I prefer tinctura nucis vomicæ, combined with some of the simple tonics, such as gentian or cinchona. Although in direct opposition to the teachings of the books, I have seen arsenic do a great deal of good in the eczema of dyspepsia. I think the best plan is to give small doses and very gradually increase—say, two minims of the liquor potassii arsenitis, increased to five, and then return to the original dose. Arsenic is a drug which has caused a great amount of discussion. While it is the dermatologist's sheet-anchor, it may be misused. It was pretty clearly brought out by the recent discussion, by both dermatologists and general practitioners, that arsenic was, in the majority of cases, a very successful and safe drug to employ, provided the physician took care to watch the effect, etc. The habit of prescribing arsenic in all cutaneous diseases can not be too strongly denounced, and I think the majority of text-

books and lecturers are to blame for not teaching the student and doctor how to make distinctions between those cutaneous diseases which are benefited by arsenic and those which are not. In children which appear healthy, but are fat and flabby in texture, fed, as a rule, on food containing quantities of starch, and who are allowed to "drink all the tea and coffee they want," and other unwholesome food, I have seen eczema which had resisted all other treatment heal up almost by magic under a corrected diet, a brisk mercurial cathartic, and a bland protective ointment applied to the affected parts. The cure is explained by looking at the ætiology of eczema in this class of patients—namely, a congested skin produced by a sluggish circulation, or a torpid state of the bowels, which we relieve by curing the constipation and restoring tone to the circulation. After this introductory treatment, I give directions regarding food, and often give tonics—such as cod-liver oil and some form of iron, preferably the syrup ferri iodidi. In young children, and persons having tender skin, care should be taken not to use an ointment too stimulating. I have a case in mind now where an ointment of the red oxide of mercury was used for a simple eczema, which caused a severe pustular eruption. When the ointment was changed for a simple protecting application, the eczema soon improved, and the child became well. I have seen several cases of eczema resulting from that much-advertised "skin success," which I believe is composed of the red oxide of mercury, some preparation of tar, and vaseline. For the removal of crusts in cases of eczema of the scalp, some oil should be used, either olive, or raw linseed-oil being the best. In scrofulous subjects you may use cod-liver oil with the hope of good results from the absorption. If there are pediculi along with the eczema, crude petroleum is useful for destroying the parasites.

A good application for local eczema in children is to apply the ointment in the form of a plaster. Unna, of Hamburg, uses an application called "Salbenmull," consisting of sheets of thin cotton material incorporated with various kinds of ointments; he also uses one somewhat similar, various medicaments being spread on gutta-percha tissue instead of cotton sheeting; the advantage of this over the former is that the gutta-percha plaster will adhere to the part without the use of a bandage. The most obstinate cases to treat are those of old, dry, rheumatoid eczemas, found, as a rule, on the limbs of old people. My plan in these cases is to give plenty of salines, unless the heart is weak; if such is the case, caution should be observed, for by giving too much alkali we may produce a state of superalkalinism which may assist to a fatal result. A very good plan to observe in giving salines to old people is to combine them with digitalis. I also give tonics, such as iron, quinine, etc., and if there are symptoms of rheumatism, it is well to give, in addition, iodide of potassium and colchicum. Externally, I first remove the crusts or scales, which may be done with green soap, the liquor picis alkalinus of Bulkley, or hot poultices; my preference is for the poultice. The heat and moisture seem agreeable to the hot, tense skin, and the patient will express himself well pleased with the treatment. After all the crusts are removed, and we have a clean shining surface, apply an ointment, stimulating or not, as the case would suggest. An ointment which I have found well adapted when stimulation was required is composed of the following:

℞. Hydrarg. chlorid. mit. . . . . gr. xxv.
Olei cadini . . . . . ♏xx.
Unguent. zinci ox. . . . . ℥j.
M. Ft. unguent.

Oleate of mercury may be substituted for the calomel, about a drachm of the five-per-cent. to the ounce. One of the most distressing symptoms is the intense itching, which may be relieved by the addition of iodoform to this ointment, or, if the disagreeable odor of iodoform is objected to, iodol, a new preparation from iodine, may be substituted with equally good results. I have seen the compound tincture of benzoin, prepared and applied as recommended by Professor Sherwell, of the Long Island College Hospital, allay the itching when all other applications had failed. Dr. Sherwell's directions are to evaporate the tincture to three-fourths its bulk, and paint this over the eczematous spot. I am not in favor of the heroic plan of treatment, such as blistering with cantharides, carbolic acid, or iodine. I think just as good results can be attained by employing milder stimulants, and if the desired effect is slower, you will be amply repaid by not causing your patient unnecessary pain and discomfort. When eczema is complicated with varicose veins, a rubber bandage applied closely to the part has a decided curative effect, due, no doubt, to the support given to the enlarged veins, restoring, or rather correcting, the circulation in that particular part. There are many other treatments recommended which are very useful under various conditions. There are two or three questions regarding which the physician must first of all satisfy himself. One is: What is the internal cause, if any? Another question: Is the disease acute or chronic? and third: What stage is it in? When these questions have been answered, the proper method of procedure will at once become apparent. The German plan of treating the external manifestations of the disease alone has many things in its favor and some against it. It is very well in cases of doubt to direct attention to the visible lesion, and await developments for light on the internal trouble. The other extreme, which the French school teaches, of attributing the disease to the so-called diathetic cause, is open to as many objections. But the unfavorable features in either system have been very successfully remedied in the English, or more particularly the American, method of taking the safe middle ground of combination, and uniting both the internal and external plans, and so bringing about results which I think will be found to be far more brilliant than if only the method of either of the European schools is strictly adhered to. I trust that, with the ever-increasing facilities in the American medical schools for the successful study of skin diseases, the day is not far distant when the general practitioner will be able to diagnosticate and treat these troubles just as skillfully as the specialist; and eczema in its protean forms will become one of the least, as it is now the greatest, of all the cutaneous diseases.

III. GENERAL CLINICAL MEDICINE.

On the Influence of Erysipelas on Lupus.—(*Prag. Med. Wchnschr.* xii., *10*, *1887.*)

Dr. R. WINTERNITZ, the author, reports three cases from the Dermatological Clinique of Prof. Pick, in which the occurrence of erysipelas had an unfavorable influence on the already existing lupus, in as much as the latter spread more rapidly in those parts affected with erysipelas. This information is interesting in view of the attempt to utilize artificially induced erysipelas as a curative measure.

On a Peculiar Whistling Sound Produced by the Pericardial Sinews.—*Wien. Med. Bl.* x., *8*, *1887.*

Dr. M. MÁTRAY, the author, observed over the heart, in three cases of adhesion of the pericardium, a loud, musical, whistling sound, which occurred during the systole and was stronger during expiration. He attributes the whistling sound to the great tension of the fibrous chords stretched between the two portions of the pericardium, and considers it of value in a diagnosis. More detailed information may be expected.

The Relation of Typhoid Fever and Rainfall.

Messrs. CHIBRET and AUGIERAS have noticed during the last severe epidemic of typhoid that there were exacerbations of the malady following abundant rainfall. Messrs. Brouardel and Chantemesse in their study have demonstrated the presence of the bacillus of typhus in the drinking water gathered under defective conditions below the village of Royat. The rainstorms were usually followed in from 30 to 35 days by an increase of pustular enteritis among the troops of the garrison.—*Le Concours Medical*, June 4, 1887.

Treatment of Diabetes.

M. MARTINEAU, at the Soc. de Thérap., stated that he had treated diabetes, with almost invariable success, by the administration of carbonate of lithia and arseniate of soda in aerated water. This is to be taken as a beverage, to the exclusion of all other drinks. Out of the 70 patients treated, 67 were cured. M. Le Blond claims to have caused the total disappearance of sugar in the urine in three cases by the administration of oxygen water. This water is similar to ordinary soda-water, except that the carbonic acid gas is replaced by oxygen. The proportions used by M. Martineau were carb. lithium, 1½ grains; arseniate of sodium, $\frac{1}{10}$ grain; carbonic water, one pint.

The Insane Ear.

Dr. C. F. MACDONALD summarizes the cases in which recovery from insanity has occurred, notwithstanding the development of *hæmatoma auris*. The exceptions to the dictum that *hæmatoma auris* is indicative of the incurability of an insane patient seem to be so limited in number, that this symptom must continue to have grave significance. Dr. Macdonald has not succeeded in collecting more than four cases in which recovery took place, notwithstanding the existence of this significant deformity. Although there is but little doubt that most superintendents of lunatic asylums could add examples to his list, they would still continue to look upon the "insane ear" as an ominous sign.

A Case of Paraplegia with Rheumatic Affection of the Joints.

(*Inaug. Diss., Bonn, 1887.*)

H. KRABBEL. A man, twenty-one years of age, who had formerly suffered from colic due to lead poisoning, became ill with an attack of acute rheumatic affection of the joints. This was cured in three weeks. After some time a new attack occurred. He was taken to the Augusta Hospital in Berlin. Great pains in the hip and knee-joints; also in the spinous process of the twelfth dorsal and first lumbar vertebræ. During the night paralysis of the legs, below the knee, occurred. Tendon reflex, strong. No derangement of the bladder. No evidence of malnutrition in skin or muscles. Nothing is said of the further progress of the disease.

A New Mild Intermittent Method of Treating Syphilis (*After Fournier*).

In this method, M. LEWENTANER recommends (after a preliminary use of salve), during the first year, the use of mercury for one month, and one month intermission. In the second year the patient receives alternately one month mercury and one month potassic iodide. During the third year a cycle of three months is adopted, viz: one month mercury, one month intermission, and one month potassic iodide. In the fourth year, one month of mercury is followed by two months' intermission and one month of potassic iodide. The author reports two cases (!) thus treated, one of which has only been under treatment for one year. —*Centralblatt für die Medicinischen Wissenschaften, No. 18, April 18, 1887.*

Heart Affections in Tabes Dorsalis.

E. LEYDEN reports a series of observations which show that there occur attacks of heart trouble during the course of a case of tabes in a similar manner as other organs are affected in the well-known gastric, laryngeal, etc., crises. The combination of symptoms corresponds to those in angina pectoris—pains in the region of the heart, frequently shooting into the left arm. These are accompanied by depression and a choking sensation, together with giddiness and irregular pulse. It is probable that the N. vagus is concerned; changes in it, in persons affected with tabes, have been, as is well known, anatomically proven to exist. Leyden's cases are therefore peculiar, as they prove the occurrence of heart troubles to be independent of gastric crises.—*Centralblatt für die Medicinischen Wissenschaften, No. 19, May 7, 1887.*

An Unconsidered Factor in the Mountain Cure for Phthisis.

Dr. C. CREIGHTON, in the *British Med. Journal*, April 16, 1887, deduces from the observations of M. Paul Bert (*Comptes Rendus* of the Paris Academy of Sciences, vol. xciv, 1882), a new therapeutic consideration of the higher altitudes in regard to the cure of consumption. These observations have reference to the oxygen absorbing capacity of the blood of animals acclimated to altitudes of 12,000 feet on the Bolivian plateaus. Such blood, it was discovered, had half again as great absorptive power for the oxygen of the air as that of animals acclimatized to the sea levels. Creighton, upon this basis, reasons that the remarkable cures or cessations of phthisis in mountain climates are due to this same increased oxygen capacity of the blood, and the consequently greater strength of the system in repairing the waste of tissues.

On Pseudo-Tabes from Arsenical Poisoning.

DANA (*Brain*, xxxvi. 456, 1887,) reports two cases and makes a careful study of the literature of arsenical paralysis, appending over 100 references. He concludes that there are two forms of this, just as there are of diphtheritic and alcoholic paralysis.

1. The ordinary arsenical paralysis, in which the motor affection and the atrophy are more marked than the sensory derangement.

2. Arsenical pseudo-tabes, in which there is no pronounced motor paralysis, but decided sensory disturbance, especially ataxia.

It is entirely improbable that either of these forms is due, as a rule, to a diffuse myelitis, but rather to a multiple neuritis; just as is the case in paralysis from lead, alcohol, diphtheria, and probably from other affections and poisons.

Beri-Beri.

The following case is narrated by P. MARIE, *Progrès Méd.*, xv., 9, *1887:* A man, 27 years of age, suffered, during a ten weeks' stay in Colon, from general debility. He noticed that the abdomen was much puffed and that on its surface there existed a spot, about the size of two hands, which was not sensitive. On the legs below the knees purple spots and œdema were observed. On his passage home the patient was somewhat suddenly paralyzed in both legs. Both thumbs were also transitorily paralyzed. Occasional vomiting. On arriving at Paris, paresis, flaccidity and wasting of the muscles of the thigh and calf were observed. The motion of the hip, extension of the knee, and the raising of the outer margin of the foot, were more specially hindered. No knee-phenomena. Slight diminution in the sensitiveness of the skin of the legs. Muscles somewhat sensitive to pressure. Convalescent. Charcot has frequently observed multiple neuritis in persons who had been for some time in the vicinity of the Panama Canal.

The Proof of the Presence of Metallic Foreign Bodies in the Human Body by Means of the Galvanometer and Astatic Needle.

From the researches of C. KALIN it is found that the presence of metallic particles (needles, knife-blades, etc.) is indicated by means of the sensitive reflecting galvanometer, even though the intervening distance be considerable. If the

foreign body have been previously strongly magnetized, and especially by an electro-magnet, sufficient indications are obtained by the astatic needle, and these are pronounced in accordance with the size of the object. The description of such an instrument adapted to this purpose is given in the original. The greater the size of the foreign body, the greater also the distance at which the deflection of the needle takes place. An interesting discussion concerns the application of the method described. Even the smallest fragments of needles are found under certain circumstances, without their presence being demonstrable by touch.—*Centralblatt f. d. med. Wissenschaften, May 14, 1887.*

Bandage for the Eyes.

Professor WICKERKIEWICZ observes that a special kind of bandage is required after operations upon the eyes in the case of those who are restive, or who are likely to infect the eyes by any means. This is especially required also in the case of drunkards. For two years he has been accustomed to employ a compressive bandage, moistened with a 1 to 1,000 solution of corrosive sublimate, which he keeps in position till the third, fourth, or even fifth day without change. In cases of cataract operation he takes infinite pains to prevent self-infection. This he accomplishes by first employing a solution of cocaine to produce local anæsthesia; the lids and the angles of the eye are then carefully washed with the solution of corrosive sublimate. The lacrymo-nasal canal is injected with a weaker solution of the sublimate containing 1 to 5,000 parts, and the whole conjunctival sac is irrigated with a solution of the same salt containing one part to 10,000 of water. His results since adopting this method have been more satisfactory than ever. (*Centbl. f. prak. Augenheilk., December, 1886.*)

Angina Pectoris without Lesion of the Coronary Arteries.

M. BALL reports to the Société des Hôpitaux a case of this kind. The patient was a man 34 years of age, who had previously had three attacks of rheumatism and one of intermittent fever. The attacks of angina began five weeks before death. There was slight aortic insufficiency, persistent and severe headache. The patient was a smoker. The autopsy showed the orifices of the coronary arteries permeable, and even dilated; insufficiency of the aortic opening; dilatation of the aorta, and hypertrophy of the left ventricle, whilst the right appeared diminished, and, as it were, crushed by the left. M. Ball explained the death by the imperfect action of the right ventricle. The quantity of blood emptied into the right side of the heart by the pulmonary veins being lessened, there was cardiac ischemia and a deficient circulation, not because of any narrowing of the coronary arteries, but despite of their dilatation. Commenting on the case, M. Huchard said he thought it one of tobacco angina, in which the patient died of arterial spasm as described by Cl. Bernard.—*Le Concours Médical, June 4, 1887.*

On Tuberculosis of the Skin and the Mucous Membrane.—(*Vjhrschr. f. Dermatol. u. Syph.* xiv. *1, p. 36, 1887.*)

Prof. E. SCHWIMMER, in Budapest. The author denies the identity of lupus and tuberculosis of the skin, which has of late been considered as established, and fully treats the various circumstances which disprove this identity.

1. The exceeding variety of skin tuberculosis as compared with the frequency of lupus and the difference in the development of the two diseases.

2. The primary appearance of tuberculosis is almost exclusively confined to the mucous membrane, from which it eventually spreads to the skin.

3. The difference in the effects produced by lupus and tuberculous skin diseases on the system. (The occurrence of lung-tuberculosis in patients suffering from lupus, is considered by the author as an accidental co-existence of two diseases.)

4. The behavior of the bacilli in lupus and tuberculosis of the skin. In the former, large masses of bacilli in each section, in the latter, isolated rods in an occasional preparation.

5. The different effect of the same medicine, especially of the escharotics, in the two diseases.

The Danger of Using Whey, Cheese, etc., from the Milk of Tuberculous Cows.

In order to emphasize the importance of the danger of using the milk of phthisical animals, M. V. GALTIER undertook to demonstrate, by numerous and various experiments, the noxiousness of the products derived from such animals, and especially of the cheese and whey. The germs of tuberculosis contained in the milk of phthisical cows are to be feared, not only when the product is freshly utilized and without transformation for food, both for man and for animals, but also where it is employed in the manufacture of the products of the dairy. These germs still exist after the milk has been treated by pressure in the cheese and the whey, and may render these products as dangerous as the milk itself. Very probably man may be inoculated with the germs of tubercular phthisis in drinking the milk from a phthisical cow, the curdled milk, the cheese, new or old, or the whey prepared from the milk of such animals. Birds and pigs which are fed with the whey may also be infected, and it is not unreasonable to suppose that from this cause proceed a number of the cases of tuberculosis of chickens and hogs. It is consequently of the greatest importance not to use the milk of phthisical or suspected cows in any way; it is better to reserve it exclusively for the food of animals, and to boil it before giving it to them.—*Le Concours Médical, May 28, 1887.*

An Unusually Rapid Case of Graves's Disease.

Dr. J. MITCHELL CLARK recently reported to the Bristol Medico-Chirurgical Society a case of Graves's disease in a girl of eighteen that proved fatal in six weeks. She came of a healthy family, commenced to menstruate at the age of fourteen, and enjoyed good health until June, 1886. During a menstrual period she then experienced violent palpitation of the heart, frontal headache, and pain in the præcordial region with nausea and vomiting; the next period was regular and without these symptoms. On August 4th the palpitation returned, though not so severely; but she noticed also that her eyes were becoming prominent, that her throat was larger, and that she was losing flesh without any obvious cause. A fortnight later she was admitted into the Bristol Infirmary, when she presented all the symptoms of a typical case of Graves's disease. There was

great enlargement of the thyroid, and a thrill could be felt in it; the eyes were very prominent; von Graefe's lid-sign was present; and the heart was beating very rapidly, with a forcible impulse and a blowing murmur at the base. There is no mention of sweating or of tremor. At first she went on well, taking arsenic, but then vomiting and later diarrhœa set in, and she rapidly lost flesh and eventually died on September 13th, the heart's action towards the last having been extremely rapid, the emaciation great, the gums bleeding and the hair falling out. No changes were found in the nerve-centres.—(*Bristol Med.-Chir. Journal, March, 1887.*

On the Early Recognition of General Paralysis of the Insane; and the Relation Between this Disease, Tabes Dorsalis, and Disseminated Sclerosis.

J. Syer Bristowe in an address reported in the *British Medical Journal* for 1887, p. 1, states that, although typical cases of general paralysis are easily diagnosticated, yet, in many instances, especially in the early stage, at a time when a diagnosis is so much to be desired, the recognition of the nature of the disorder is difficult, if not impossible.

He gives a synopsis of the symptoms, mentioning the fact that epileptiform attacks and other mental derangements my occur in all these disorders. In general paralysis of the insane the paralytic symptoms are most pronounced in connection with the organs of speech. The usual duration of the disease is said to be two or three years, but it is probable that early indications, consisting of slight degrees of some of the characteristic phenomena, may be detected by the careful observer years before the first outspoken symptoms become noticeable.

Bristowe reports a series of interesting cases of general paralysis, illustrating the occasional difficulty of diagnosis. In one patient, for example, with fairly characteristic signs of general paralysis were associated symptoms both of tabes and of disseminated sclerosis. In this and in several other cases delusions never occurred. He then describes three cases, probably of locomotor ataxy, in which, however, there was so much mental disturbance that the diagnosis might be open to question.

Dyspeptic Origin of Visual Troubles.

In the opthalmological congress, M. Grandelement, of Lyons, said: "It is often observed that there are intermittent or remittent visual troubles which one can explain neither by the anomalies of refraction, nor by lesions of the media, or of the deep membranes of the eye. It is common in such cases to attribute these in a stupid way to the nerves. But if we scrutinize with attention the entire organism, we shall always find in such cases a defective condition of the digestive functions;—a dyspepsia, perhaps more or less chronic, and sometimes also a fault of nutrition (excess of phosphates, glycosuria, etc.). These functional affections of vision, this kind of neuropathic phenomenon, constitutes one of those numerous sympathetic neuroses caused by a faulty assimilation of the food, and the formation of toxic alkaloids or ptomaines, which result in the most various distant troubles. The visual defects observed most frequently consist in a diffused pain of the globe, radiating toward the temples, the forehead, and even to

the scalp. There is hyperæsthesia of the retina, with photophobia and photopsia, more or less severe, following the limited exercise of accommodation. Other patients complain of scotomæ, hemianopsia, diplopia, and especially of *mouches volantes*. All of these ocular neuropathies may be cured, or their trouble, at least, greatly ameliorated, by careful attention to dietetics and hygiene, and by the employment of saline laxatives and alkalies in moderate doses and for a long time. In the most severe cases, flushing the stomach, rest in bed, or the use of a hypogastric girdle to sustain the dilated stomach and intestines, will produce the best results."—*Le Concours Médical, May 28, 1887.*

Visual Troubles in Diabetes.

Glucose is a negative poison in the blood. Introduced in excess, in any way, it does not produce bad results directly, but because it prevents good results, since it changes successively the action of each organ. The eye is the first victim of the poisonous results of sugar in the blood. The ocular injury is not a final complication of diabetes mellitus, a phenomenon of consumption; it is an indication of the glucose poisoning, a phenomenon of the incipient stage.

The ocular trouble is more frequent than the diabetes. Every person with sugar in the blood does not become diabetic, but every such an one is more or less troubled with visual defect. And this last is also more frequent than the systemic failure in nutrition. Only one-fifth of the number of diabetics end in consumption; but, as has been said, no diabetic is free from some ocular trouble.

If the consumption were the cause of the ocular troubles, all those morbid processes which produce consumption would also produce similar visual troubles. But this is not the case. The ocular trouble precedes the diabetic symptoms, and more especially precedes the consumption. The early appearance of this symptom explains the great number of patients in whom the oculist is able to find glycosuria, when no other symptom of the disease has made its appearance. Neither is the symptom an infallible forerunner of approaching death. When upon the appearance of the least visual defect one hastens to seek out sugar in the blood with the same assiduity as in the urine, it will more certainly be recognized that the day when glycohæmia produces blindness is far from being the day when it will produce death.—*Le Concours Médical, May 28, 1887.*

Morphine in Diabetes.

T. Mitchell Bruce (*Practitioner*, 1887, 20) was induced by his success with morphia in the treatment of a series of cases of diabetes, to study from a therapeutic standpoint some of the still unsolved questions concerning the pathology of the disease. By administering morphia *per orem* to a selected case, and thus reaching the liver through the portal circulation, the glycosuria was made to disappear. When as large doses of the drug as the patient could bear were given hypodermically, almost no effect on the elimination of sugar was obtained. The author concludes that, in the case in question—

1. The glycosuria was due to an increased ingress of sugar into the blood; not to a diminished destruction of it in the system, else the hypodermic use of morphia would not have been without effect.

2. The increased ingress of sugar was not caused by a simple transportation of

sugar from the intestine or portal vein to the general circulation, inasmuch as it continued unabated when an exclusively animal diet was employed.

3. The excessive glycosuria going on in this case was effected mainly, or entirely, in the liver; not in the muscles or the other viscera. For (*a*) when the morphia was introduced into the liver by the portal vein it reduced the sugar to *nil*, but had little effect on the other viscera, while (*b*) when introduced into the general circulation hypodermically, it diminished the amount of sugar but little, but had a decided effect on the other viscera, especially the central nervous system.

4. In this instance if the diabetes was of nervous origin, the seat of the process appears to have been at any rate in the liver, not in the central nervous system.

Statistical Inquiries on the Results of the Treatment of Polyarthritis Rheumatica with Sodii Salicylas.

M. REIHLEN has compared the cases of Polyarthritis rheumatica which came under observation in the city hospital at Nurnberg during the years of 1868–1875 with those cases which were treated in the same hospital during the years of 1877–1884, utilizing those cases only which were characterized as severe by the presence of fever and several swollen joints. Whilst in the first period the most varied therapeutic methods were applied, sodii salicylas in large doses was methodically administered during the second period. The author overlooks the influence of this mode of treatment on the development of endocarditis and pericarditis, as no hospital statistics can give an exhaustive insight concerning this point, and moreover the consideration of relatively few cases shows that the salicylate salts are powerless as preventives or restoratives in complications from the heart.

As to the cures, the results with sodii salicylas were in men 95.2 p. ct. (against 91.5 p. ct. in the preceding period); in women, 91 p. ct. (against 85.1 p. ct. in the preceding period)—therefore but a very trifling change for the better. Change into chronic rheumatism took place in the sodii salicylas period in men in 4.7 p. ct. (against 5.1 p. ct. previously); in women, 7 p. ct. (against 9.1 p. ct.). These trifling therapeutical improvements were greatly heightened by an improvement in the prognosis. Whilst formerly 25 p. ct. of the men and 23 p. ct. of the women had a relapse within a month after the first attack had been cut short, these numbers were reduced to 12 and 13 p. ct. respectively in the period during which the salicylate was used. The average time in which a cure was effected was, moreover, considerably reduced—in men, from 9.5 days (as in the former period) to 4.1 days; in women, from 10.2 to 6.1 days.—*Centralblatt für die Med. Wissenchft., No. 16, April 16, 1887.*

Trichinosis in Holland.

The report of the medical inspector of Zeeland on this subject, states that a number of people, at the end of January and beginning of February, suffered from the following symptoms: Swelling of the eyelids, stiffness and pain in the muscles, hardness on pressure, fever, excessive sweating, disordered digestion, heaviness in the arms and legs, sleeplessness, swelling in the face and limbs, great

thirst, conjunctivitis, dry red tongue, and photophobia. These symptoms were apparently caused by trichinosis. From one woman's arm Drs. Isebree Moens and Van Rentgerhem extracted several trichinæ by means of the harpoon. The discovery of the source of infection was attended by great difficulties. All the butchers' shops were visited by inspectors. In a farm outside of Goes, ten people were found to be suffering from the disease. On January 1st a pig had been killed, half had been put in salt to be cured, and the fresh half was sold to a butcher in Goes. The meat kept was left four weeks in the salt. Two samples were taken from the salted flesh and examined, besides those found in the meat in the shop. The salted piece was full of trichinæ. Those who had partaken of the meat had shortly afterwards become ill. Professor Forster, at Amsterdam, gave some of the meat to five rats, which died, and trichinæ were found in them. It is known that trichinæ, prior to their development, must pass into the digestive canal of some host other than that in which they were generated, and that rats are naturally subject to trichinæ, also that pigs devour rats, living or dead. For some time there had been a great many rats on the farm, and it is not impossible that they spread the trichinosis. The question then presents itself—in what manner did the rats become trichinous? This is not easy to answer. It is possible that a trichinous rat might have been brought over in the ship *Zuid Beveland*, which carried a large quantity of American pig's flesh, or the infection might have been due to the meat imported. The epidemic in Goes shows what widespread effects a piece of infected pig's flesh may produce. The number of people attacked cannot be exactly given, but about seventy, or more than one in every hundred, inhabitants suffered. Only one of the patients died. —*Brit. Med. Journal, June 11, 1887.*

Rötheln, German Measles.

The *Edinburgh Medical Journal*, May, 1887, says: At a time when this exanthem is prevalent, and therefore liable to be confused with ordinary measles or scarlet fever, the valuable contribution of Atkinson to the January number of the *International Journal of the Medical Sciences* deserves careful perusal. He defines rötheln as a specific, exanthematic, contagious disorder, characterized by a period of incubation, lasting usually from two to three weeks; a prodromal period, varying from a scarcely appreciable period to one day, less commonly two, and very rarely several days; and an eruptive period, in which there is an exanthem closely resembling that of measles. A period of desquamation is in most cases wanting, and when present is but feebly developed. During the attack, and frequently preceding the eruption, there occurs almost constantly an enlargement of the cervical, submaxillary, auricular, suboccipital and sometimes of other glands, which is often painful, but never suppurative. Catarrhal symptoms are absent, or but slightly marked. A faucial hyperæmia is almost constant, but is rarely accompanied by pain. Throughout the attack fever is absent in about half of the cases, and when present rarely endures to the end of the second day, or exceeds 102.2° F. The attack seldom lasts longer than three or four days, and the patient rarely keeps to his bed. The affection may prevail sporadically or epidemically, and is contagious, though to a less degree than measles. One attack usually confers immunity from subsequent ones, but does not protect from

measles or scarlet fever, nor do these exanthems confer immunity from rötheln. Children are usually affected, though adults have no special insusceptibility. Rötheln is perhaps more apt to be prevalent with or immediately before or after epidemics of measles or scarlet fever, still it has frequently been observed quite independently of these. Such, therefore, may be coincidences without significance. Rötheln and measles are the two disorders most likely to be confused, and a careful consideration of both shows that, while the general points of difference are decided, they will often fail to apply in individual cases. There are no peculiar symptoms upon which a diagnosis can be based with certainty. This fact serves to account for some of the recorded cases in which two attacks of measles have been said to occur to the same person. One point emphasized by Liveing deserves notice, that while on the first day the eruption of rötheln resembles that of measles, on the second it more closely simulates that of scarlet fever.

Suicide in Ancient Rome.

The *Lancet*, May 14, 1887, says: This sombre, though fascinating theme has usually been handled as if a series of anecdotes of celebrated suicides sufficed to exhaust its interest; but Dr. Iginio Gentile, of Milan, in an able memoir recently read before the Circolo Filologico of that city, adopts the more scientific method of treating it in relation to the notions of death, as these have been developed and embodied in the various philosophic systems. Aristippus of Cyrene proclaimed the nullity of existence, and sought to deprive death of its traditional horrors; and Hegesias, by persuading the Greeks that the sum of pain exceeds the sum of pleasure, caused so many to destroy themselves that his "prælections" were prohibited. Epicurus, shrinking from absolute pessimism, maintained that the dread was as culpable as the desire of death, which, by itself being neither a good or an evil, might yet become, according to circumstances, either the one or the other. The next step in the evolution of the notion of death was that of the Stoics represented by Zeno, who placed the chief good in the pure repose of the reason, and limited himself to considering death as a necessary evil, and suicide as a rational mode of exit. These notions in the march of historical development penetrating the Roman mind, so averse to philosophical speculation, formed part of the groundwork of morals; and, in spite of the protest of older citizens, who hated this intrusion of Greek subleties, suicide received its sanction in the Latin "mori licet cui vivere non placet" (he is at liberty to die who does not like to live); so that self-destruction became common in the last years of the Roman Republic and in the first of the Empire—a period prolific in social and political perturbations. When the Empire reached its culmination, while there were development and vigor in the provinces, there were corruption and decay in the city, where the new condition of things supplied new incentives to suicide, and voluntary death, refined into a philosophy, became the crown of the career of the Roman voluptuary. It was in the upper classes, the old Republican oligarchs, become effete under the Empire, that this notion prevailed; but in the lower strata of society, in the suffering masses, germinated the mystic idealism that prepared the victory for advancing Christianity. Epictetus and Marcus Aurelius represented the last phase of philosophy which sanctioned voluntary death in a mitigated form, while the "acta urbis" (the daily journals) registered

suicides every twenty-four hours. At last came the message of salvation, the new faith which preached the comforting doctrine of man's duty to live. Dr. Gentile's paper, highly interesting to its Milanese audience, may prove not less so to a yet wider public.

Hay Fever and its Treatment.—*Jahresbr. d. Ges. f. Natur. und Heilkunde in Dresden.*

Beschorner, the author, having given an exhaustive account of the historical development of the disease and the opinions based thereon, entered upon his personal experience by a recapitulation of the etiological details in hay fever. It is necessary to distinguish between predisposing and exciting causes. The disease occurs only in weak-nerved individuals, or those so predisposed, as a result of peripheral irritation, which affects either the branches of N. trigem. or those of some other nerve, exciting reflexly the vaso-motor nerves of the mucous membrane of the nose to a greater activity, and under excessive irritation paralyzes them.

Consequently hyperæmia, swelling and increased secretion from the mucous membrane of the nose, as well as asthmatic attacks appear.

The contracting of the disease requires a nervous disposition and an idiosyncrasy toward certain influences. The pollen of grasses should be strongly emphasized as an exciting cause—for Germany, more particularly, Anthroxanth odorata and that of the cereals.

As to symptoms, we have to distinguish between the catarrhal and the catarrhal-asthmatic form. The patient may have both forms at the same time, one form only, or both in succession. In the catarrhal-asthmatic form cough is seldom or never absent. The diagnosis is easy. Suddenness of the attack, exacerbation when out of doors in the vicinity of flowering meadows, fields and grasses, œdematous swellings of the eyelids and surrounding regions, and the characteristic appearance thereby produced, under certain conditions hereditary tendencies, and the regular reappearance, insure the recognition of the disease.

The prognosis is absolutely favorable; the disease ceasing after the flowering period of meadows is passed. The therapeutics, as to permanent cure, may be considered as powerless. We have here to contend with the general disposition, as well as to remove the disease, by diminishing its injurious effects, and finally to shorten the individual, and especially the asthmatic attacks. This last may be attempted by inhaling camphor solution or vapor, vapor of balsam of Peru, painting mucous membrane of the nose with cocaine, belladonna salve, and quinine solution, etc. If, after the removal of all external influences, the symptoms do not disappear, it becomes necessary to remove the erectile tissue of the nose, in order to break the chain of conditions inducing nervous excitement. In extreme cases this treatment must be extended to all parts of the mucous membrane of the nose. In this manner, we succeed in greatly lessening the annoying symptoms of the catarrhal form and also much relieve, and, for a time, cure attacks of a catarrhal-asthmatic nature, which are to be considered as reflexes of a nasal origin.—*Centralblatt für die Medicinischen Wissenschaften.*

Cancer and Phthisis as Correlated Diseases.

W. Roger Williams, F. R. C. S.: I propose to point out, in the briefest manner possible, the correlation between cancer and phthisis. For detailed treatment of the subject I must refer the reader to the Middlesex Hospital Surgical Report for 1885. The following facts show that there is the most intimate connection between the two diseases. The widespread belief as to the incompatibility of phthisis and cancer is attributable to the erroneous teaching of Rokitansky. That such a grossly inaccurate statement should ever have obtained credence shows the folly of blind submission to authority in such matters. The chief evidence to be cited may be arranged under two heads: 1. As to *family history*. (*a*) Of 134 families subject to *breast* cancer, one or more relatives, among the adults, were known to have died of, or were subject to, phthisis in 74, or 55.2 %. (*b*) Of 129 familes subject to *uterine* cancer, one or more relatives, among the adults, were known to have died of, or were subject to, phthisis in 60, or 46.5 %. (*c*) Similarly, of 53 families subject to cancer of the *tongue* and *mouth*, phthisis prevailed, among the adults, in 17, or 32 %. Thus in these 316 cancerous families there was a history of phthisis in 151, or 47.7 %. There was a history of both phthisis and cancer in the same family in 18 cases out of 134 families subject to *breast* cancer, and in 14 cases out of 129 familes subject to *uterine* cancer. In a large proportion of the foregoing cases the causes of death were unknown. If these had been eliminated, the amount of phthisis would have appeared much greater, as may be judged from the following statements in which this has been done. Thus 40.9 % of the fathers of patients with *breast* cancer were of phthisical familes, and 33.9 % of the mothers. Of the fathers of patients with *uterine* cancer, 40 % were of phthisical families; and of the mothers, 30.3 %. Of the fathers of patients with cancer of the *tongue* and *mouth*, 29.4 % were of phthisical families; and of the mothers, 5.8 %. With regard to the prevalence of phthisis among these patients' *brothers* and *sisters*, in 88 families subject to *breast* cancer there were one or more deaths from phthisis, among the adults, in 40; in 81 families subject to *uterine* cancer, in 41; and in 52 families subject to cancer of the *tongue* and *mouth*, in 14. 2. As to the *necropsies*. (*a*) Of 44 necropsies for breast cancer, old arrested phthisical lesions were found in 4 instances; and in 2 other cases the patients had died with phthisis in active progress. (*b*) Of 88 necropsies for uterine cancer, old arrested phthisical lesions were found in 12 instances. (*c*) Of 34 necropsies for cancer of the tongue and mouth, in 5 cases old arrested phthisical lesions were found; and 4 other cases had died with phthisis in active progress. Thus in these 166 necropsies cancer and phthisis were found associated in 27 cases, or 16.2 %.—*Lancet, London, May 14.*

On Cases of Valvular Disease of the Heart, Existing for over Five Years without Serious Symptoms.

Sir Andrew Clark (*Brit. Med. Journ.*, 260, 325, 370, 1887,) extracts from the clinical histories of his office patients since 1873, 684 cases in which there existed well-marked chronic valvular disease of the heart, not indicated by any symptom, and not interfering with the patient's health. A series of elaborate tables accompanies the text. Concerning the diseases for which the patients were re-

ceiving treatment, it appears that nearly one-half were affections of the digestive system, and about one-fifth diseases of the nervous system.

The author relates by way of illustration, a number of very interesting and instructive cases, not included in the tables, showing that the evidences of the gravest cardiac lesions could co-exist with excellent health.

Many of the patients had been told by physicians previously in attendance that they could live but a short time. To others the strictest rules of diet and of exercise had been given, with the result that both health and happiness suffered greatly. For all of these cases, Clarke recommended a return to the ordinary hygienic *régime* necessary for the physiological conditions of life. He warns us, however, that this is only suitable to chronic and stationary cases. When the heart is irritable, irregular, or frequent; when the murmurs vary in character and intensity, or when there is any febrile action, patients must be kept at rest, and the lightest diet administered. Any other course is most unsafe.

The author next reports several cases showing that well-established cardiac lesions having lasted several years, and due to inflammation of the valves, may in later years entirely disappear. This may be observed in the case of the mitral bruit often heard in chorea, and dependent on organic changes. These murmurs of chorea, in fact, usually disappear eight or nine years after the attack. The same disappearance of all evidence of disease can often be observed years after a rheumatic endocarditis had produced a loud systolic murmur. Although such recoveries are often seen in the young, yet they sometimes take place in the old, and the author quotes cases in substantiation of this fact. Even well-marked valvular defects of a degenerative nature may in rare cases disappear. There must be *differentiæ* between the histories, habits, surroundings, occupations, etc., of those who suffer and die of heart disease, and of those who are not in the least incommoded by its presence.

According to Clark, the factors necessary in mitral disease for the exemption from unpleasant cardiac symptoms, and for the continuance in the duties and enjoyments of life, are as follows: 1. Good general health. 2. Just habits of living. 3. No exceptional liability to rheumatic catarrhal affections. 4. Origin of valvular lesion independently of degeneration. 5. Existence of the valvular lesion without change for over three years. 6. Sound ventricles, with moderate frequency and general regularity of action. 7. Sound arteries, with a normal amount of blood and tension in the smaller vessels. 8. Free course of blood through the cervical veins. 9. Freedom from pulmonary, hepatic, and renal congestion. The prognosis in aortic disease is not so favorable even under the same conditions.

Peripheral Neuritis.

In discussing this subject in the *Brit. Med. Journal*, 1887, p. 6, Ross says that the symmetrical manner in which the disease usually attacks the body shows that at least in the majority of cases it is produced by some poison in the blood. Thus salts of lead, arsenic, and probably of copper and other metals are capable of giving rise to it. In a second group of cases the disease is caused by alcoholic excess, the fumes of bisulphide and oxide of carbon, and probably by the abuse of chloral and chloroform. It has also been observed in advanced diabetes. A

third variety arises from animal poison. Diphtheritic paralysis is the best known instance of this. It is also to be observed in syphilis, smallpox, scarlet fever, measles, typhoid, typhus, intermittent fever, dengue, tuberculosis, leprosy, and beri-beri. It is probable that it may be caused by rheumatism, and that the wasting of the extensors seen in chronic rheumatoid arthritis is due to a neuritis of the neighboring nerves. There is also an *idiopathic* multiple neuritis.

The symptoms consist in more or less widely distributed atrophic paralysis. Rosa has never been able to assure himself that active spasm preceded the paralysis in any case. The condition of the cutaneous reflexes varies. With a very few exceptions, the patellar reflex has been wanting in all recently reported cases of alcoholic, diphtheritic, and other forms of neuritis of the lower extremities. The knee-jerk is sometimes absent in lead poisoning, even when the muscles of the lower extremities are not appreciably involved. Yet the failure of the patellar reflex is a valuable but not an absolute sign of neuritis. The electrical test affords conclusive evidence in the majority of cases. The faradic excitability of the affected nerves and muscles is lessened or abolished, and the reaction of degeneration is detected with the galvanic current. The paralysis affects especially the extensors, as is well seen in the "wrist-drop" of lead palsy. That following alcohol, bisulphide of carbon, the animal poisons, and even arsenic, usually attacks the extensors of the lower extremities first. Paralysis of the extensors of the forearm soon follows in alcoholic neuritis, then the thighs and upper arm, then the flexors of the leg and forearm, and finally even the muscles of the trunk may become involved.

In diphtheritic paralysis the soft palate is the first to be affected; then the muscles of the eye, and after some time the lower extremities. The arms are seldom involved.

The paralysis of the extensors in neuritis produces a temporary or permanent flexion of the limb, simulating a spasm of the flexors.

The sensory disturbances accompanying the paralysis resemble considerably those of locomotor ataxia.

The disease may most easily be confounded with chronic poliomyelitis, Landry's paralysis, and locomotor ataxia. From the first it is distinguished by the presence of well-marked sensory phenomena, and by the order in which the muscles are attacked. From the second it differs in exhibiting the reaction of degeneration with marked sensory disturbances and wasting of the muscles. From the third it differs in many respects, but the character of the gait is sufficient to distinguish it. We observe, namely, in neuritis a peculiar elevation of the knee in walking, with a drooping of the toes, and an unusual exposure of the sole of the foot to one standing behind the patient. Such a case is unable to elevate the toes if sitting on a chair with the soles flat on the floor.

As regards the pathological anatomy of the disease, the author shows that opinions are now generally agreed that the lesion is seated in the nerves themselves and not in the cord.

The Odors of Infectious Diseases.

It is a fact of some interest, at all events from a diagnostic point of view, that some of the infectious diseases possess special odors. The only odor, besides

that of rheumatic fever, I have seen any mention of in literature is that of typhus fever, which is of a peculiarly heavy and offensive nature, and has been likened to the smell of rotten straw. It is quite characteristic, and is obviously not the result of filth, since it is present in the cleanliest people who have contracted the disease. It is evidently some special product of the virus of the disease, or of the tissues under its influence.

It is doubtful whether the same thing can be said of the disgusting and peculiar odor of smallpox, which occurs only in the worst cases, and is of the gravest omen. It is not present in cases which do well, even where the body is covered with scabs, and it therefore probably means merely necrosis of the tissues, and a ptomaine generated in that process.

Some six years ago I made a minute study of scarlet fever, and I was very much struck by a peculiar sweet odor of the breath, almost aromatic in character, which, though far from unpleasant in itself, is rendered unpleasant by its associations. I also observed that this odor is most marked in the early stages of the disease. That this is no mere imagination will be clear when I mention that a nurse to whom I pointed this out, diagnosed the occurrence of scarlet fever in a small-pox patient at the height of the small-pox, a whole day before any other symptoms of scarlet fever appeared, simply from the peculiar scarlatinal odor of the breath, and I have myself on several occasions been able to diagnose scarlet fever in this way before the appearance of the rash. This smell is sometimes excessively strong, especially in cases of what I should call toxic scarlet fever, where the throat is but little affected, the rash is discrete and dark, and there is much delirium. It is then like a powerful and heavy ether.

The same peculiar sweet odor is fairly often to be observed in the breath in cases of typhoid fever, but never attains the penetrating and powerful character that it does in certain cases of scarlet fever. I have not been able to distinguish between the odors of typhoid and scarlet fever.

Measles also has a smell of its own, somewhat resembling that of scarlet fever, but quite distinguishable.

It is not unlikely, I think, that these odors are chemical products of the micro-organisms, and I would call special attention to the powerful odor in delirious cases of scarlet fever. It is barely possible that these odors may ultimately assist us in fixing the micro-organisms of the diseases mentioned.

It is, however, quite improbable that the same odors would be obtained from cultivations on substances differing widely from the tissues of man. Thus Brieger finds that the bacillus of typhoid fever, grown in a solution containing grape sugar and salts, gives off an odor of ethyl alcohol; grown on albuminous soils, an odor like whey. I have only to add that no one who gives attention to it can fail to observe the peculiar sweet odor of scarlet fever.—*Dr. Niven, in Manchester Medical Chronicle, June, 1887.*

Abscess in the Brain Resulting from Disease of the Ear.

Dr. Thomas Barr, of Glasgow, has contributed a most interesting and valuable article on this topic, in the *British Medical Journal* of April 3, 1887.

It is admitted at the outset that where abscess of the brain is not caused by an injury, it depends usually upon some pre-existing purulent centre, and this is

most frequently in the ear. This is most usually in the middle ear, and it is held that the published accounts of internal ear inflammation, as the source of cerebral abscess, are erroneous. The nature of this disease is a chronic purulent inflammation in the lining membrane of the tympanic cavity, mastoid antrum, and mastoid cells. While there is a general consensus of opinion that ear-disease is the most frequent cause of cerebral abscess, Dr. Barr tries to show, successfully we think, that it is more frequently the cause than is even supposed. In a synoptical record of 76 cases (Sir William Gull and Dr. Sutton, in Reynolds's *System of Medicine*, 1872), 27 cases, or more than one-third, were set down as due to ear disease. Lebert (*Virchow's Archiv.*, 1856, vol. x.) gives 1 in 4 as the proportion, based upon 80 cases of cerebral abscess. But in many cases not attributed to the ear, given by these authors, Barr claims that the ear evidently had not been examined, "while in a goodly number the disease was said to have originated in a blow, which may be quite compatible with its origin in ear disease." In 10 of the cases in the article in Reynolde's *System of Medicine*, no reason is given for the cerebral abscess. "We know that up to the time at which these articles were prepared, the hearing organ was very little examined, either in the clinical wards or in the post-mortem room." Coupled with the fact that purulent disease in the ear may exist without the knowledge of the friends of the patient, or of even the patient himself, Dr. Barr believes we are not in a position to state that 47 cases in these 156 of cerebral abscess are all that were due to chronic purulent disease of the ear. He thinks that from what is now known, that fully one-half of all cases of cerebral abscess are due to purulent disease of the ear. "As medical men come to use the ear-speculum in every case presenting symptoms of cerebral disturbance, the frequency with which ear disease leads to a fatal issue will be found to be greater than has hitherto been suspected."

The most frequent situation of the abscess seems to be in the temporo-sphenoidal lobe of the cerebrum. In the 76 cases tabulated by Dr. Barr, 55 cases, or 73 per cent., were in the so-called middle lobe of the brain; 13 were in the cerebellum; 4 in the cerebrum and cerebellum; 2 in the pons Varolii; and 1 in the crus cerebelli. The disease is propagated from the ear to the interior of the cranium by two ways: 1. Most frequently by the roof of the tympanum and mastoid antrum; 2. By the inner wall of the antrum and mastoid cells to the dura mater lining the posterior fossa, and to the cerebellum. In some rare instances pus makes its way from a cerebral abscess into the middle ear, probably through the tegmen tympani. The "otorrhœa cerebralis," however, of ancient writers cannot be accepted, since the ear disease and not the cerebral disease is the primary affection. Opening the cranial wall by means of chiselling is regarded as productive of concussion to a brain already very sensitive by disease.

"It is quite clear that, in the future, persons suffering from abscess of the brain dependent upon ear disease should not be left to die as they have been in the past, without an effort being made, by opening the interior of the cranium, to reach the brain and drain the abscess. How this can be best done cannot fully be settled until further experience has been gained."

The concluding remark as to prevention is worthy of attention. "When every member of our profession is sufficiently impressed with the importance of chronic suppurative inflammation of the middle ear, and prepared efficiently to treat this

disease in all its stages, the occasion for this operation will probably seldom arise."

Repeated Attacks of Measles.

Dr. James B. Ayer concludes an article on the recurrence of eruptive diseases in the Boston *Med. and Surg. Journal*, May 19, 1887, as follows:

The statement of most of the older writers, that susceptibility to measles was destroyed by one attack, has been disproved, and all modern authors agree that the disease has occurred two or three times in the same patient. Atkinson argues that it is illogical to insist upon a diagnosis of rötheln, in a doubtful case, *solely* because the patient has passed through one attack of measles, but has no doubt that many attacks of rötheln have been mistaken for measles. An accurate differential diagnosis between measles and rötheln cannot be made. In illustration, I can relate a recent case:

A month ago I found in my office a young man, twenty-one years of age, whom I had attended twenty-six months before for an undoubted attack of measles. Two days previously his eyes became inflamed, and he woke the following morning early, with a chill and nausea. He attended to business in the forenoon, was feverish, complained of lassitude, and passed a poor night. When I saw him, the eyes were reddened and the lids greatly swollen, and there was a marked nasal catarrh and a dark-red dotting of the fauces. There was cutaneous hyperæmia of the cheeks, and small mulberry patches, irregularly round and oval, about the ears and neck. On the body there was a measles-like rash, which was not confluent. During the following four evenings, the temperature rose from one degree to a degree and a half above the normal. The pharyngitis became more marked about the fourth day, when the rash began to fade from the neck and body. The glands of the neck were not painful, and certainly not swollen to any extent.

When the blotches had disappeared and the rash had faded, there still remained the congestion of the cheeks and a pale marbling of the body, which are both natural to him in a state of health.

The mildness of the symptoms and the short period of invasion suggested rötheln, but the catarrhal symptoms, and possibly the rash, favored the diagnosis of measles. The patient himself felt that his symptoms were similar to his first attack of measles, though of much milder form, and I felt it important to disinfect my office (as he had been waiting an hour), and to consider it a case of measles.

I believe that second attacks of measles *generally* are of a mild form, though it is stated that fatal second attacks occurred among Confederate soldiers in the early part of the late war.

Variola.—Curschmann states that this disease has recurred as often as five or six times. He says that while the second attack is generally mild, there are exceptions to the rule, as in the case of Louis XV. of France, who, after passing through an attack of variola in his fourteenth year, died of the same disease in his sixty-fourth. The experience of some physicians in this city, who have seen much of variola, confirms the belief that repeated attacks are not of rare occurrence.

Varicella.—Thomas says: "A true relapse, that is, a renewed appearance in

its totality, as reported by Cassowitz, I have never seen." According to Trousseau and Canstatt, relapses of varicella are frequent.

Syphilis.—There are unquestionable instances of second infection. Dr. Jonathan Hutchinson says that, while twenty-five years ago it was taught almost universally that one attack secures immunity from others, he himself has had not a few opportunities for observing the course of second attacks in patients whom he had seen during the first attack. These second attacks, he said, were generally modified.

Bäumler asserts that a second attack of the disease will be a modified one, and will be milder the earlier it takes place after the first.

Erysipelas.—This is a recurrent disease. Pich, in "Heath's Dictionary," says: "A patient who has been once attacked by this disease is more prone to have it again than one who has never suffered—a marked contrast to the diseases we have been considering, where one attack generally confers immunity."

"On the Respiratory Phenomena of 'Cheyne-Stokes.'"

A. Weber, in *L'Union Médicale*, February 19, 1886, says in a certain number of maladies, but more especially in Bright's disease, it is not unusual to witness respiratory movements of a peculiar rhythmic character, now well known under the designation of "Cheyne-Stokes breathing," which consists essentially in the periodic succession of two phases, viz., of apnœa and dyspnœa. Some authors think that we ought to attach to dyspnœa of this type a pathognomonic character, but it is difficult to accept this opinion, for it is not easy to define accurately the relationship between this and many other forms of dyspnœa. Most authors have endeavored to determine the relative duration of the two periods of apnœa and hyperpnœa. According to Saloz the duration of the former varies from 5 to 45 seconds, while the latter lasts from 15 to 75. Clinically, one often meets with a number of other phenomena accompanying Cheyne-Stokes breathing. Amongst these, disturbances of the circulation occupy a foremost place. These consist in the modification of pulse-rate and arterial tension. The period of apnœa coincides with increase of the arterial tension and slowing of the cardiac pulsations. This, however, has been denied by Bernheim and others, Filehne affirming that the maximum of the arterial pressure and the minimum of frequency of pulse-rate coincide with the height of the period of hyperpnœa. But although various authors may differ as to the exact period at which these circulatory disturbances appear, still they agree in the important fact that the augmentation of the arterial tension coincides with the diminution in the number of cardiac pulsations, thus following Marey's law. Other circulatory troubles consist in the frequent presence of the *bruit de galop;* in depression of the great fontanelle, and in pallor of the mucous membranes. This latter sign, though denied by many authors, is of great importance according to Filehne, who attributes it to spasm of the arterioles, which appears to play an important part in the production, not only of the cardio-vascular symptom, but also of the peculiar dyspnœa itself. At the commencement of the period of apnœa, the pupil is contracted, and does not react to light; on the resumption of respiration, on the contrary, it begins to dilate. Occasionally during the stage of apnœa one observes lateral conjugate deviation of the eyes (generally to the right), and sometimes nystag-

mus. These phenomena frequently cease during the stage of dyspnœa. They are in harmony with the convulsive movements of certain groups of muscles, either of the face or extremities, but most often localize to one side of the body, which also occur during the period of apnœa. It is the presence or absence of agitation and delirium which characterizes the two varieties of Cheyne-Stokes respiration; the one is accompanied by marked agitation and intense delirium, the other by a relatively tranquil dyspnœa. The former may be compared with the intoxication produced experimentally by carbonate of ammonia; the latter, that induced in animals by creatinine. Certain intellectual troubles also accompany this form of dyspnœa, viz., somnolence, and a kind of coma, more or less profound.

The respiratory rhythm of Cheyne-Stokes, properly speaking, is not, as a rule, established at the onset with all its characteristics fully developed, and it does not disappear without leaving a certain amount of respiratory obstruction. In the majority of cases it is preceded and followed by a variety of dyspnœa, to which the name of *intermediary rhythm* has been given, and which constitutes a kind of transition between the regular respiration or the habitual dyspnœa and the veritable phenomena known as Cheyne-Stokes breathing. This rhythm is represented by alternate acceleration and slowing of the respiratory movements; it is frequently met with, according to Schiff, in the aged, or in cases of mitral regurgitation. Briefly stated, Cheyne-Stokes breathing is a particular respiratory trouble, accompanied by variable concomitant symptoms more or less constant—*viz.*, circulatory, pupillary, convulsive, and cerebral, all of which plead in favor of the hypothesis of an ischæmia of the nervous centres. It is met with most frequently in the last stage of interstitial nephritis, in atheroma of the cerebral arteries, and in certain affections of the heart, profuse hæmorrhage (*e. g.*, in cases of hæmophilia), tubercular or simple meningitis, cerebral tumor, etc. As a rule, it betokens the near approach of death. The most efficacious treatment consists in the subcutaneous injection of morphia. Chloral hydrate often diminishes the distress; inhalations of oxygen or nitrite of amyl have been tried with variable success.

E. Hyla Greves.

Persistent Priapism.

J. Mackenzie Booth, M. D., of Aberdeen, in the *Lancet*, May 14, 1887, says: Cases of persistent priapism crop up in practice from time to time, but their occurrence is rare enough and their causation sufficiently obscure to merit a passing notice. Several cases of this nature, lasting from one to four months, are recorded in the *Lancet* in 1845, 1867, and 1873, in most of which excessive coitus was the exciting cause. In a case lasting for six weeks, which recently came under my observation, no such cause was present, nor was there any coexisting injury or disease of the spinal cord or nerve centres to account for the condition.

The patient, W. S——, a seaman, aged fifty-five years, was a married man with twelve children, most of whom were grown up. Save for a dysenteric attack thirty years before, which prostrated him for six weeks, he had always enjoyed good health. He had always been of temperate habits, and had never suffered from venereal disease. While at sea on June 27th last, he awoke in the

morning with the penis erect and very painful, especially at the root. He said that the day before he had been exposed to cold and wet. Two days later, during which he was unable to sleep for the pain, he came under my care. I found him lying in bed with his knees drawn up so as to prevent the bedclothes from touching the affected parts. The penis was erect, hard, painful to touch, and bent backwards along the abdomen in the middle line, and the scrotum was much relaxed. The pain was most severely felt on either side of the crus, and the parts there were found to be hard, swollen, and exceedingly painful to touch. Otherwise he was quite well and had been in robust health up to the time of this seizure. There was no other disease of the urinary apparatus or rectum discoverable, and the urine was normal and easily passed. A purgative was administered, and half-drachm doses of the bromide of potash ordered to be taken twice daily. This was continued steadily for four days without the slightest change in the affected organ. On the second night an enema of a drachm of laudanum in two drachms of starch was given, after which the patient had a few hours' sleep. On the fourth day ice was applied to the penis and continued for over a week. Small doses of tartar emetic combined with morphia were also administered at intervals, nausea being occasionally induced. Still, the penis remained as turgid as ever, and exceedingly painful to touch. During the next four weeks, after consultation with the late Professor Dyce Davidson, everything that we could suggest to relieve the painful condition was tried. Oleate of morphia and other anodynes rubbed into the penis and perineum, and morphia suppositories gave only temporary relief to the pain. Blisters were applied over the perineum, and free leeching both over the perineum and the penis itself, were resorted to, but without appreciable effect. The amount of turgescence varied slightly from time to time, but was not materially reduced at the end of the fifth week. During all this time, too, the hardness, swelling, and pain were most marked over the muscles at the root of the penis, and there was total absence of sexual desire throughout. In the beginning of the sixth week he was ordered five grain doses of the iodide of potash in mixture, to be taken four times daily. From that time there was a steady improvement, till in a fortnight's time—i. e., at the end of the seventh week—the penis had well nigh regained its wonted condition, and the patient was able to don his nether garments and walk about without pain. He shortly afterwards resumed his seafaring life, and since then he has had no recurrence of his troublesome malady.

In the above case the causation was different from that of most of those previously recorded. In these the history of injury of nerve-centres or excessive coitus generally pointed to distant or reflex nervous irritation as the main cause of the priapism, but here it was evidently due to local inflammation about the muscles constricting the bulb of the penis. The marked swelling, hardness, and pain over these muscles, coming on a few hours after exposure to cold and wet, and continuing while the turgescence of the penis lasted, indicated continued obstruction to the venous efflux as the chief factor in its causation. The exihibition of the iodide of potassium seemed to have a beneficial effect in hastening the recovery, as up to the date of its administaration the symptoms had shown no sign of abatement, while immediately thereafter gradual improvement took place, terminating in complete relief in fourteen days. The perusal of a closely

analogous case reported by Dr. Mitchell Bruce in the *Lancet* (vol. i., 1878, p. 90) led to its adoption. In that case also the patient was a man of fifty-five years, the priapism lasted six weeks, and it subsided in twelve days during the exhibition of the iodide of potassium.

The Influence of Concave Glasses on Myopia.

It is somewhat humiliating that, notwithstanding the number of years that the refraction of the eye has been studied, and the perfection to which the means of diagnosing errors of refraction has attained, there should be no general agreement as to the proper optical treatment of myopia. That such, however, is the case, is shown by the fact that within a few months of each other two authorities so much respected as Landolt, of Paris, and Foerster, of Breslau, have expressed opinions which are diametrically opposed.

Landolt (*Refraction and Accommodation*, 1886,) holds the view that a myope should never wear glasses which require him to use his accommodation. In low myopia, therefore, glasses are only to be worn for distant vision, while in moderate degrees glasses must be given for near vision, which under-correct the myopia and enable the wearer to see at a given distance without using his accommodation. In extreme degrees, complications are so frequent that each case must be considered on its merits. We believe that this custom of under-correcting the myopia for near vision is widely adopted in the French school, and it has some adherents in this country.

Foerster, however (*Arch. of Ophthal.*, December, 1886), takes an opposite view; he believes that it is, as a rule, desirable that a myope should constantly wear his distance-glasses, and cites numerous cases in which the constant wearing of fully correcting (and in some instances of over-correcting) glasses for many years was not injurious.

Landolt founds his treatment, first upon the possibility that the action of the ciliary muscle may have a tendency to increase the myopia; and, secondly, on the assumption that in myopia (and, indeed, in any form of ametropia) the normal relation between accommodation and myopia is altered, and that it is an advantage to the myope to be able to see near objects without using his accommodation.

Foerster, on the other hand, believes that the accommodation has nothing directly to do with the increase of myopia, but that this is due chiefly to the act of convergence; accordingly he advises the wearing of the fully-correcting glass, in order that the patient may be induced to hold objects far away from his eyes, and thus use less convergence. To insure this in the case of children, he advocates the use of mechanical appliances, in order to prevent too close an approximation of the eyes to the book. The eyes, with their correcting glasses, are, of course, in the same condition as emmetropic eyes with regard to the accommodation required. This practice of advising patients with slight and moderate myopia to wear their correcting glasses always has been very generally adopted, we believe, in this country.

The most interesting part of Foerster's paper, is that in which he quotes fifty-one cases in which glasses, which either fully corrected or over-corrected the myopia, had been worn for many years. In none had the myopia undergone any

considerable increase, and in none had a large myopic crescent developed. From these cases he draws the conclusion that the constant wearing of fully-correcting glasses cannot be injurious to a myope. It should, however, be pointed out that nearly all these cases had reached the age at which myopia frequently becomes stationary before the use of the glasses was commenced. They, therefore, only show that this treatment is safe in myopes who have attained the age of puberty, and have not large myopic crescents.

The probability is that both sides are too dogmatic, and that the safe course lies between them. That an immense number of myopes can wear fully-correcting glasses almost as constantly as if they were a part of their face, without the least discomfort or injury, is a matter of every-day experience. On the other hand, many myopes find it extremely fatiguing to use the accommodation required for near vision when they are wearing their correcting glasses, and it is not at all improbable that myopia which is progressing rapidly may be aggravated by such efforts.

In young people with myopia of a moderate degree, which shows no signs of rapid increase, full correction, with constant wearing of the glasses, is perfectly safe; older persons, even though they have not reached the presbyopic age, often require weaker glasses for near vision, but if, after a little perseverance, they can use their correcting glasses for near vision, it is surely better that they should do so, and thus be placed in a condition as nearly as possible identical with emmetropia. In a matter of this kind much will depend upon individual habits and character, and it is impossible to lay down hard-and-fast rules.

There can be no question that excessive convergence in young subjects is most injurious; whether it is necessary to employ mechanical contrivances to prevent this is a matter which we do not intend to discuss here. It is of importance, however, that all conditions which favor the approximation of the eyes to the book should be carefully guarded against, and when, owing to a high degree of myopia, the glasses which remove the far-point to a safe distance cannot be worn because of the diminution that they produce in the size of the image, convergence must be diminished by adding prisms to weaker glasses.—*British Medical Journal* (*editorial*), *May 21, 1887.*

Cancer and Phthisis as Correlated Diseases.

W. Roger Williams, F. R. C. S., of Middlesex.

In consequence of the unity of nutrition existing among all the parts of every living thing possessed of any organic solidarity, changes of nutrition affecting an individual part necessarily react on other parts. This relation, which is known as correlation, was first clearly pointed out by Cuvier with regard to normal states, and is equally applicable to morbid conditions. Such correlations are, indeed, very numerous. They may be regarded as the outcome of a powerful synthetic tendency, which causes the individual whole to be as much conditioned by its parts as each part is conditioned by others. But why changes in this or that part should be linked with this or that particular correlation, whilst variations in other parts, apparently equally important, excite no such correlated changes, is for the most part beyond our ken. In some instances the developmental history of the correllated parts gives us a clue, as in the case of homol-

ogous structures, such as teeth and hair, which are particularly liable to vary together. But very often no such indication can be discovered. We cannot say whether one part governs the others, or whether all are governed by some earlier synthetic tendency. Why, for instance, should color and constitutional peculiarities go together? What connection is there between deficiency in pigment and such changes in the muscular and osseous systems and in the general constitutional condition as albinoes exhibit? Why should such individuals be weaker in body, more delicate, and more feebly developed than others with pigment of their own species? Why, too, should the degree of development of pigment in the epidermis so greatly influence the susceptibility to certain diseases and drugs? How is it that red-haired persons are more liable than others to melanosis? Why are white cats with blue eyes nearly always deaf, and why are white horses distinguished from their colored congeners by special liability to sarcomatous tumors? A similar question might be asked with regard to the curious correlations seen between quite distinct parts in many cases of monstrosity. In all of these instances no explanation is possible in the present state of our knowledge. Indeed, the subject has been but little investigated. In this wide uncultivated field rich harvests may be gathered.

I now propose to point out, in the briefest manner possible, the correlation between cancer and phthisis. For detailed treatment of the subject I must refer the reader to the Middlesex Hospital Surgical Report for 1885. The following facts show that there is the most intimate connection between the two diseases. The widespread belief as to the incompatibility of phthisis and cancer is attributable to the erroneous teaching of Rokitansky. That such a grossly inaccurate statement should ever have obtained credence shows the folly of blind submission to authority in such matters. The chief evidence to be cited may be arranged under two heads:—

1. As to *family history*—(*a*) Of 134 families subject to *breast* cancer, one or more relatives, among the adults, were known to have died of, or were subject to, phthisis in 74, or 55.2 per cent. (*b*) Of 129 families subject to *uterine* cancer, one or more relatives, among the adults, were known to have died of, or were subject to, phthisis in 60, or 46.5 per cent. (*c*) Similarly, of 53 families subject to cancer of the *tongue* and *mouth*, phthisis prevailed, among the adults, in 17, or 32 per cent. Thus in these 316 cancerous families there was a history of phthisis in 151, or 47.7 per cent. There was a history of both phthisis and cancer in the same family in 18 cases out of 134 families subject to *breast* cancer, and in 14 cases out of 129 families subject to *uterine* cancer. In a large proportion of the foregoing cases the causes of death were unknown. If these had been eliminated, the amount of phthisis would have appeared much greater, as may be judged from the following statements in which this has been done. Thus, 40.9 per cent. of the fathers of patients with *breast* cancer were of phthisical families; and 33.9 per cent. of the mothers. Of the fathers of patients with *uterine* cancer, 40 per cent. were of phthisical families; and of the mothers, 30.3 per cent. Of the fathers of patients with cancer of the *tongue* and *mouth*, 29.4 per cent. were of phthisical families; and of the mothers, 5.8 per cent. With regard to the prevalence of phthisis among these patients' *brothers* and *sisters*, in 88 families subject to *breast* cancer there were one or more deaths from phthisis, among the adults, in 40; in

81 families subject to *uterine* cancer, in 41; and in 52 families subject to cancer of the *tongue* and *mouth*, in 14.

2. As to the *necropsies*—(*a*) Of 44 necropsies for breast cancer, old arrested phthisical lesions were found in four instances; and in 2 other cases the patients had died with phthisis in active progress. (*b*) Of 88 necropsies for uterine cancer, old arrested phthisical lesions were found in 12 instances. (*c*) Of 34 necropsies for cancer of the tongue and mouth, in 5 cases old arrested phthisical lesions were found; and 4 other cases had died with phthisis in active progress. Thus in these 166 necropsies, cancer and phthisis were found associated in 27 cases, or 16.2 per cent.—*Lancet*, May 14, 1887.

Treatment of Fevers.

The treatment of fevers must be directed mainly to maintain the strength and to procure rest.

I shall say very little on this subject, except to throw out some hints. Cases of fever requiring careful treatment are toxic cases, cases where death is liable from exhaustion, and cases where it is liable from complications.

In toxic cases our power is least, but still, in those toxic cases attended with delirium and high fever at the start, such as we see in scarlet fever, we may tide the patient over by cold sponging and the avoidance of all irritations.

In cases where death is liable from exhaustion, the principal things are quiet and good feeding.

To consider this class and also those in which complications are liable to cause death, and also to illustrate my proposition as to treatment, let us take a severe case of typhoid fever. One of the great things we have to dread is perforation of the abdominal ulcers.

Now this occurrence will depend partly on the constitution of the patient and partly on treatment. I need not say that no food should be given which could in any way irritate the ulcer. But that is not all. The ulcer is a tropho-neurosis, secondary to local changes no doubt, but still a tropho-neurosis, and its occurrence and course can be greatly affected in two ways—first, by judicious diet; second, by avoiding irritation of the nervous system.

Judicious diet means a nutritious diet, easy to assimilate, and which is taken up readily by the stomach and bowels. This may consist of milk, beef tea made from raw meat or chicken, and properly flavored, gruels, made from fine meals, arranged and varied, fruit juices sugared, and raw egg beat up in palatable materials.

Too much attention cannot be paid to humoring the caprices of the stomach, and varying the food to suit its demands. It is also of great consequence to subdue persistent sickness in typhoid fever. If sickness persists, one must dodge about till one has subdued it, and got the stomach to submit to taking up some food. This may be effected by various means, among which may be mentioned cold sponging, alkaline drinks, with a little champagne in them—sometimes champagne alone will do it; a sinapism over the pit of the stomach will often be of service. The whole armamentarium of drugs is at our service, and if the obvious and, perhaps, more useful measures I have mentioned did not succeed, I should then try drugs. In a case where the digestion is evidently feeble, food

ought to be peptonized. We may thus save energy out of all proportion to the direct energy of the digestion saved. The food should be freely pancreatized, and some odoriferous liquid added to cover any taste. Pancreatized milk does not form large curds, a great gain. Finally, though all other irritations are to be avoided, easily assimilated food must be got into the patient; if rendered necessary by sickness, in the form of enemata. This is vital, for the reasons I have stated. We thus guard as far as possible not only against perforating ulcers, but also against other tropho-neuroses, such as bedsores, and against the complications of fever generally.

We have seen how little will irritate our patient into elevation of temperature. His nurse ought, therefore, to be unirritating, possessing quick perceptions and free from fuss. In all respects she should behave as though the illness were no-wise dangerous. The patient will generally like the light subdued and the windows open. In fact, every source of irritation must be promptly removed, if possible.

In the same way the nervous system must be assisted to recover from the jangle produced by internal causes as well as by external. It is in this respect that antipyretics are of value. I have made numerous trials of antipyrin and antifebrin in typhoid, typhus, and scarlet fever. *Their usual effect is to subdue restlessness, remove delirium, and produce sleep.* In fact, their chief value is as nerve sedatives. I have not given more than 7 grains of antifebrin and 30 of antipyrin. In two cases the reduction of temperature after antifebrin did not follow. Both died. I think antipyretics are of real service in assisting a prognosis. Where no effect is produced, the case is certainly a very serious one. This is true, also, of quinine. I have not given larger doses, because both drugs in large doses have caused collapse. I prefer antifebrin to antipyrin, as it has seemed to me that it interferes less with the stomach, and it is equally harmless in small doses.

These drugs, then, are valuable as calmatives, as is, also, the cold bath. Both, I believe, help to restore the impaired nutritive processes. The cold bath seems, however to have a more lasting effect. Still I have seen the effects of five grains of antifebrin last more than 24 hours.

On the whole I think the same good effects may be got out of antifebrin as out of the cold bath, if its use is carefully regulated. I should not, however, omit cold sponging, which often effects much good, without the risks attending the bath.

A word about alcohol. In my opinion alcohol is of the utmost value in the treatment of fever, not indiscriminately employed, but given especially in cases characterized by great prostration and in the later stages of severe cases. Champagne is in the last instance the appropriate remedy. I have seen at least one case unquestionably saved by champagne, and I do not know that we can say as much for any medicine. Alcohol is often used to procure sleep. It is the best drug in smallpox, given as hot toddy, but usually everything is unavailing in delirious smallpox. In scarlet fever its effects on delirium are sometimes surprising. The delirium ceases and the patient passes into a sound sleep. Nevertheless, on the whole, I prefer antipyretics for this purpose, and should restrict alcohol, as a rule, to the cases which I have mentioned.—*Dr. Niven in Manchester Medical Chronicle*, June 1, 1887.

The Physiological Results of Affinity.

A writer in the *British Medical Journal*, May 21, 1887, discusses admirably the results which may follow marriage with a deceased wife's sister. This subject has more interest in England than it has here; but even in America it has recently been the occasion of an ecclesiastical inquiry and decision.

The chief physiological law involved in the question is the law of heredity, and this is more peculiar than many persons suppose. Children inherit the proclivities of their parents, especially when both parents have the same proclivities. As shown by the cultivation of the lower animals, and it holds equally in the case of human beings, the breed may be greatly improved by a careful selection of partners, whose vicious tendencies are antagonistic and whose good qualities are alike. Marriages of consanguinity, however, by concentrating upon the offspring reduplicated tendencies to certain diseases and reduplicated vicious propensities of many sorts, with often a minimum of reduplicated tendencies to good, cause the race to deteriorate. But marriages of mere affinity have no such effect, and of this sort is marriage with a deceased wife's sister. As to whether marriage with a deceased brother's wife is one of mere affinity, we shall see.

Here, however, it is desirable to refer to the assertion that a *widow* and a *widower* are on equal ground so far as the effects produced upon them by their former married life are concerned; for unless this be conceded, it is impossible to regard marriage with a brother's wife and marriage with a wife's sister as precisely similar so far as affinity is concerned. To this assertion, if it be understood of widows and widowers having children by their previous marriages, I give the most unqualified contradiction. Indeed, the fact may be regarded as well-established, (putting *widows* physiologically in quite a different category from *widowers*), that, with very rare exceptions, *traces of the first child's father are discoverable in all succeeding children of the same mother, whatever the direct paternity of these may be.* The corresponding fact, as regards the lower animals, makes dog-fanciers (and others interested in preserving purity of breed) extremely careful to protect their female charges from being corrupted. For a cross-strain of any kind once contracted is rarely eradicated, but lasts more or less for the rest of life, the vicious marks making their appearance in almost every puppy that is born in succeeding litters, no matter how pure a breed the putative father's or mother's originally may have been (see *Mayhew on Dogs*, p. 191).

The father has no similar power of transmitting traces of his former wife to the children of her successor, for the diseases which are occasionally contracted by contagion are quite distinct from the collaterally inherited traits referred to. Consequently, the brother's wife, if she have had children by that brother, and the wife's sister, connected by mere affinity, do not stand in the same relation to a man who may contemplate marriage with either; nor are the two cases by any means parallel, as Dr. Espin and the prohibitionists generally suppose. The former kind of marriage is infinitely more nearly allied to incest than the latter, which can only be called incest by an outrageous misnomer. But the absence of children on the part of the brother's wife makes an immense difference, and reduces that kind of marriage to much the same level as marriage with a deceased wife's sister. It was the knowledge of this fact which rendered possible

the exceptional statute known as the law of the levirate, above referred to, and no fancied superiority of the right of property to the moral law. As might be expected, there is generally a greater distinction between half brothers and sisters when they have different mothers than when they have different fathers; and this is sometimes very noticeable, though not always remarked, because children of the same father and mother occasionally differ very much.

It is singular that *collateral heredity* was not more closely studied by physiologists long ago. Pedigrees have been considered complete which have run in the direct lines only; and yet it must be patent to every one, that, if Miss A. marry Mr. B., and after having children, become a widow, she is no longer in the pristine physiological condition bestowed upon her by her parents, but has acquired an additional "strain," which it is impossible to prevent from descending in some measure to the children of any future husband, C. or D.

It is more than probable that the effect produced upon the ovaries by impregnation is not only special upon the particular ovum which becomes developed into the particular child begotten, but general over the entire mass of at least one, if not both. And even if this be denied, it is sufficient to mention the placental endosmosis and exosmosis which for nine months the fluids of mother and child undergo to convince an unbiased judgment that new elements have entered into the mother's constitution which cannot fail to influence more or less her future progeny. But where impregnation has failed to take place, no such effects can follow, and the feeling of repugnance on the part of the deceased husband's brother to take the childless widow for his own wife, to which feeling, as one usual, Dr. Espin has referred, is attributable to mere sentiment.

For confirmation of the more startling statements made in the foregoing argument, the reader is referred to Dr. Alexander Harvey's papers in the *Monthly Journal of Medical Science* for 1849 and 1850, and to his essay on cross-breeding; to *Kirke's Physiology*, under the head of impregnation of the ovum; to *Carpenter's Comparative Physiology*, in which is the following sentence (p. 536): "It appears from Mr. Newport's ingenious experiments, that the contact of a single spermatozoön is not adequate to produce complete fecundation, but that the penetration of a certain number of spermatozoa is quite requisite; and he has ascertained that fecundation may be effected partially (so as to occasion some, though not all of the normal changes in the ovum), by a smaller amount." And similarly Dr. Tyler Smith, in Chapter I. of his *Manual of Obstetrics*, says, "The pathogenetic influence may, I think, even be seen in the mammalia, and in the human female. In the well-known case of the mare covered by the quagga, the foals produced afterwards by intercourse with her own kind still bore the stripes of the quagga. In the human female, it is found that a woman having married and borne children by her husband becomes a widow, marries a second time, and bears children to her second husband which have the lineaments of her first husband."

Cerebral Tumor, with Symptoms Simulating Hysteria.

Dr. A. Hughes Bennett reports, in the Edinburgh *Medical Journal*, May, 1887, the case of a young lady, aged sixteen, precocious as regards the development both of body and mind, whose father, brother and sister were markedly neurotic

in character, who complained of blindness, imperfect hearing, and loss of power in the lower extremities. Her mental condition has always been peculiar; she has exhibited marked erotic tendencies; on several occasions she has been detected in more than equivocal relations with men, and it is stated that she was at least on one occasion overheard making indecent overtures to her own brother. She had been expelled from a grammar school in Germany, the offence being so bad that her schoolmistress declined to give an explanation for her dismissal, and her parents, knowing her habits, did not press for a reason. Subsequently she went to a school at a fashionable watering-place near London, where her conduct was characterized by general misconduct. At various times she had fits of laughing and crying, and irregular movements associated with a nervous attack. In October, 1875, and while apparently in good health, she declared that she had become completely blind. As this occurred immediately after correction for mutinous conduct, and as she had got the reputation of being extremely cunning and willful, the schoolmistress and others thought she was malingering. A medical man called in stated that he could find nothing the matter with her. Some few days afterwards she completely recovered her sight. This seemed to indicate still further that her complaint was either intended or imaginary. She spent her Christmas holidays at home, accompanying her family to evening parties, etc. She was then seen by a London physician, who stated that she was hysterical, and who ordered strict moral control and cold baths. On returning to school, which it seemed she disliked, she again stated that she had become perfectly blind, and in addition deaf. She continued for some weeks in this condition, when her hearing became completely restored, but the blindness remained. She was attended at different times by several practitioners, who agreed that the symptoms were of an emotional or imaginary nature, and that the patient was hysterical, and they ordered appropriate treatment. About February, 1876, she stated that she very rapidly lost the power of her lower limbs, and that she could not walk. This, it was supposed, indicated her desire to avoid the daily walks, which she disliked, and to have drives instead; with this also the deafness returned. In this state she continued till April 1st, when Dr. Bennett saw her for the first time.

The condition of the patient was then as follows: A tall, full-grown, highly-developed, healthy-looking young woman. She stated that she was quite blind in both eyes. A variety of methods were tried to test this, but without any definite results. The pupils were both widely dilated, and very sluggish in their movements. On ophthalmoscopic examination, with the exception of the vessels of both discs being very slightly congested, the appearances were normal. She also stated that she was completely deaf in the right ear, and partially so in the left one, so that one had to talk loudly to be heard. It was observed, however, that on some days she could hear perfectly well. Examination of the ear revealed nothing. She complained of slight weakness in the lower limbs, and that she could walk only with the greatest difficulty. On examining them, they were found of good muscular development. When lying on her back, motion and sensation seemed perfect; but at times there was hyperæsthesia of the skin of the legs. When she walked she staggered and moved about awkwardly, and stated she felt as if her legs gave way under her. There was no tenderness or

abnormal condition of the spine. She stated that she suffered frequently from severe headaches in the occiput, which, however, were not constant, and lasted only a few hours at a time. Her memory and intellect were in no way affected. She described all her symptoms with the greatest minuteness and exactitude. She had the manner of exaggerating her ailments so common in nervous persons. She cried out if her foot were touched, but if her attention were taken away from it, firm pressure could be made without causing her to wince. The pulse was 100. The extremities were cold and blue. Temperature normal. Tongue slightly furred. Bowels constipated. Appetite good. She had not menstruated since her illness commenced. Otherwise all the symptoms were normal. On subsequent examination there was abundant evidence that masturbation was practiced to a very great extent.

The diagnosis being uncertain, no active treatment was adopted. General hygienic and dietetic measures were suggested till the case had been further observed. The above conditions remaining, an eminent London physician saw the case with Dr. Bennett. He came to the conclusion that it was one of aggravated hysteria, and gave as his opinion that little was to be done except placing her under judicious moral control. A respectable and experienced nurse was engaged to look after her under my direction, the patient remaining at home. There was no special medicinal treatment except occasional simple domestic remedies. She in no way improved. Every now and then she had attacks lasting from one to three hours, which had all the appearances of hysterical fits, involving shouting, laughing, crying, throwing herself about, striking the nurse, etc. On April 15th, her blindness remaining as before, she stated that her deafness had so increased that she could only hear with the greatest difficulty. The nurse said that at times she could hear quite well. She could now hardly walk, and could only with difficulty crawl from one room to another with assistance. On four or five occasions another physician (one of the first authorities in Europe on nervous diseases) saw her, and after considering her condition from every point of view, was of opinion that it was a case of hysteria. On April 25th she became restless and greatly excited, chiefly at night, and frequently alarmed the household by crying out and getting out of bed. Change of air and scene were judged desirable, so she was boarded in a private house in the suburbs of London. The excitement continued to increase, till on the 28th there was wandering and delusions. She was now totally blind, deaf, and could not stand or move her limbs. She did not know any one, and passed the contents of the rectum and bladder in bed. Her appetite failed; she complained of violent headache; her pulse was 140. Temperature could not be ascertained. On May 1st she became unconscious and wildly delirious, raving chiefly about some faults she had committed at school, about babies and their birth, tying the umbilical cord, etc. Pulse 150. These symptoms continued till the 4th, the patient becoming gradually weaker. In the afternoon she appeared quieter; and about 5 p. m. she was seated in an arm-chair at the fire. It was obvious she was very feeble. Shortly after this she became suddenly comatose, and in spite of every effort to support her strength with nutrients and stimulants, she gradually sank at about 2:45 a. m. next morning.

At the autopsy the body was found to be well-nourished, and all the organs

healthy except the brain. On removing the calvaria, the pia mater was found deeply congested, and scattered over its surface were found five or six tubercular-looking bodies about the size of small millet-seeds. The vessels on the surface were greatly engorged with blood. On removing the cerebral lobes in thin slices, a tumor was discovered in the right hemisphere. On further manipulation this mass was found to be about the size and shape of a hen's egg, of a dark translucent color, and of nodulated appearance. It was of soft consistence, highly vascular, and on its surface were small extravasations of blood. It occupied the medullary substance of the middle lobe superior to the lateral ventricle, with the cavity of which it did not communicate, although it caused a marked bulging of its roof.

Several cases have come under Dr. Bennett's notice, in which this same difficulty in diagnosis occurred.

A Remarkable Experience Concerning Leprosy—Bearing on the Question: Is Leprosy Communicable Through Vaccination?

W. T. GAIRDNER, M. D., LL. D., Professor of Medicine in the University of Glasgow, writes in the *British Medical Journal* of June 11, 1887:

The time seems to have arrived when, without injury or offence to any one concerned, it is possible to bring under the notice of my medical brethren some facts, and some inferences arising more or less directly out of the facts, in a case which occurred to me some years ago, but which I have found it necessary hitherto to deal with as involving matters of professional confidence not suitable for publication. Even now I shall deem it expedient to frame this mere narrative in such terms as shall not point to any definite locality, or to any recognizable person, among those chiefly concerned; although, by a formal certificate granted only the other day, I feel, as it were, absolved from the last tie that bound me, even under the most fastidious sense of professional duty, to reticence.

Six or seven years ago the parents of a young boy, fairly healthy in appearance, but with a peculiar eruption on the skin, brought him to me. After more than one most careful examination, in which I had the assistance of my colleague, Prof. McCall Anderson, we came to the conclusion, which we announced to the parents, that the boy was suffering from incipient, but still quite well-marked, leprosy in its exanthematous form; a diagnosis afterwards amply confirmed. What struck me at the time as most peculiar was, that this case, coming from a well-known endemic seat of leprosy (an island within the tropics) and with a letter involving medical details by a medical practitioner of many years' local experience; sent to me, moreover, for medical opinion and guidance, should not have been more frankly dealt with by a diagnosis announced even to the parents, before they left the island. The father of the child was a sea-captain constantly engaged in long voyages—for the most part between this country and the island alluded to. Both father and mother were Scotch, and there were several other children, all reported as quite healthy, as also were both the parents. The parents were informed that it would be best for the child to live in this country, and his mother agreed to remain with him accordingly. The mother determined for a while to settle in Greenock, and I placed her accordingly in communication

with Dr. Wilson of that town, who for some time thereafter remained in medical charge of the case.

Meanwhile, the course of post brought me in a few months a reply from Dr. X., not only entirely assenting to our diagnosis as communicated to him, but stating that he had been perfectly well aware from the first of the case being one of leprosy, but had deliberately chosen not to affirm the fact or even to allude to it in any way, either in his communications with the parents or in his letter to me. No reason was assigned for this (as it appeared to me) very remarkable reticence; but, as I did not wish to have the credit of having discovered for the first time what a gentleman so much more familiar with the disease might be supposed to have overlooked, I took means to inform the parents of Dr. X.'s reply, and of his having been all along of the same opinion with regard to the disease as we were.

For several years I neither saw nor heard of this child except accidentally and in a way entirely to confirm first impressions. About three years ago, however, while engaged in lecturing on specific diseases, and among others, briefly, on leprosy, I made an effort to find out something more about this patient. From Dr. Sewell I now learned that the poor boy had gone steadily to the worse, and was extremely feeble, covered with sores, and in a most deplorable condition physically, but still receiving every attention and care that constant medical treatment, with the most faithful and loving maternal nursing, could afford to lighten his sufferings. I accordingly proposed, within the next few days, a visit to my old patient as a matter of satisfaction to myself. Unhappily there was no other apparent object, either as regards diagnosis or treatment, for a visit which was, nevertheless, very gratefully accepted.

The case was now in the most advanced stage of leprosy, proceeding to mutilation of the extremities, and accompanied not only by external sores, but presumably by internal lesions, which had reduced the patient to the last stage of emaciation. It was on this visit that the curious particulars now to be related were first brought to my knowledge by Dr. Sewell, and afterwards confirmed by the statement of the mother. Her husband, who in his frequent voyages had opportunities of coming into communication with Dr. X., had remarked to him how very strange it was that, even in writing to a medical man about the case, he had given no hint of his opinion about it. The Doctor's reply to this was, in the end, to the effect that he had kept silence because he did not wish to compromise a boy of his own, whom he (Dr. X.) believed to be a leper, and from whom he believed at the time that the boy he had sent to this country had become infected with the disease. He further explained that he had vaccinated his own boy with the virus derived from a native child in a leprous family, and, as I understood (though perhaps not definitely so stated) that leprosy had declared itself in the native child after the vaccination; and, further, that (using his own child as a *vaccinifer*) he had vaccinated our patient directly from him. Before sending the last-named patient away with his parents, he had satisfied his own mind not only that his own boy was leprous, but that he had in this way become the source of the disease to another; but, the disease in his own child being in a very mild form, he was anxious not to disclose its existence. Meanwhile Dr. X. had died; his estate had passed into the hands of trustees; and I was informed that this

reputed leper-boy had been, under the instructions of his father and his guardian, placed and retained at a public school well known to me in this country, and that the boy was pursuing the usual course of a public-school education, in entire unconsciousness of the disease with which he was supposed to be affected.

This information, so communicated, placed me in rather a difficult dilemma, namely—was I justified in taking steps to ascertain the truth of the story as regards Dr. X.'s boy, either by personal investigation or, at least, by inquiries conducted so as to result in a well-grounded and scientifically exact opinion as to facts? And, further, supposing that such opinion should turn out to be that Dr. X.'s boy was a leper, was it a matter of duty on account of others to formally disclose the fact, be the consequences to the boy what they might! It was hardly probable that a boy generally known to be a leper would be retained permanently in any public school in this country, even had it been unquestionably a matter of medical doctrine that such a proceeding was quite safe. On the other hand, the boy was receiving the benefits of an English education at the express wish and on the responsibility of his father and guardian, and without (so far as appeared) any misgivings on the part of any one. He was an orphan, and in what was to him a foreign land; his remaining under instruction might be, and probably was, a matter of the greatest possible importance to him. To bring him, therefore, even by an indiscreet inquiry, under the ban which in many or most countries still attaches to leprosy, was certainly no part of the business of an outsider, and could only be justified at all by an overwhelming sense of duty to others.

Under these circumstances I thought it well to consult, privately, one or two of those friends in London whom I believed to know most about leprosy, and among others Dr. Liveing. These friends concurred in assuring me that, in the rather improbable event of their being personally consulted as to the retention of a leper in a public school (it being presumed of course that he was physically fit otherwise), they would have no hesitation at all in affirming that the other boys would not be endangered by such proceeding. As I happened to be very well acquainted with one of the medical officers (though not the ordinary medical officer) of the school in question, I communicated these opinions to him, and stated to him at the same time the extraordinary circumstances which had begotten for me such a lively interest in the son of Dr. X. In the course of a few days I was informed that an inquiry had been held by the medical staff; that the boy had been sent for and privately examined (though not ostensibly ill in any sense); and that it was, beyond all doubt, considered to be a case of leprosy. The medical authorities decided, however, that under the circumstances it was not their duty to sound the alarm, or in any way to disturb the boy's education.

From this time onwards (except the death of the first patient soon afterwards) I heard nothing more of these matters till a few weeks ago, when I was asked to see Dr. X.'s son professionally on behalf of the school-authorities; and if so advised, to request Dr. Anderson also to give an opinion as to the present state of health of this young man, who happened at the time to be visiting some friends in Glasgow. It was represented to me that he had maintained, on the whole, fairly good health since I last heard of him through my medical friend, and had not been incapacitated from school work except on account of a contagious eczema which had been prevailing, and with which he had been affected

in common with other boys. Apparently, however, the opinion had arisen that his general health was not quite so good, and that in view of a cutaneous affection of this kind, apparently communicable, existing, it was no longer expedient that he should remain at the school. Indeed, I could not but come to the conclusion that his removal, on public grounds, had been practically settled; and with every desire to soften the blow as much as possible to the poor boy, it was felt to be necessary that his guardian, at least, should receive unequivocal and unbiased testimony as to the actual state of the facts and circumstances under which the decision was arrived at. Under these circumstances I saw and examined this boy, and made a report, along with Dr. Anderson, to the effect that the disease was evidently leprosy, though of a remarkably mild type, as shown by discolorations and cicatrices, and also by large anæsthetic areas on the back of one limb. All breaches of surface, however, and all discharge had ceased at the time of our report, and Dr. Anderson felt still in a position to affirm that no danger to others could occur from the boy's remaining at school. On this last point I did not feel able to give an unqualified assent to my colleague's opinion; but as regards the matters of fact and observation there was no doubt whatever, and our report accordingly on these was substantially as above.

Undefined and Obscure Disease.

Tumor in the Right Iliac Fossa—Pain and Tenderness to Pressure at Seat of Tumor, and over the Surface of the Abdomen generally—Vomiting—Treatment—Disappearance of the Tumor—Difficulty in arriving at a Correct Diagnosis.—Suspicion of Malignant Disease.—(Retrospective diagnosis is usually an easy task. Difficulties, which at the outset of a case proved puzzling, are explained away by the subsequent course of events. They were, however, none the less difficulties at the time, and to men conscientious in their work, the source of no little anxiety. To men possessed of high diagnostic powers, these difficulties are, of course only of rare occurrence, but to less favored mortals, I suspect they occur much more frequently than is generally allowed.) For myself I freely confess the following case proved doubtful and puzzling when it first came under my notice, both as to its nature and the proper treatment to pursue:

On the 2d of January, 1887, I was asked to see Mrs. D., West street, Sheffield, æt. about 40, married late in life, no children. Menstrual periods still regular. She was suffering from severe pain in the epigastrium and right iliac fossa, with general tenderness over the surface of the abdomen. There was severe vomiting; the matters brought up being dark and bilious looking. Her easiest position was on the back. The face looked pinched and drawn, and expressed intense suffering. The complexion was of a dark leaden hue, strongly suggestive of malignant disease. Tongue heavily coated with a white fur. Prostration extreme. She complained of an intensely bitter taste in her mouth, and of flatulent eructations. She was very thirsty. There was no desire for food. Pressure over the stomach was painful; the deeper the pressure the greater the pain. Examining the abdomen, I found a tumor the size of a fairly large orange, in the right iliac fossa, in the neighborhood of the ileo-cæcal valve. It was hard to touch; handling it gave rise to a severe pain. It did not pit, or yield to pressure. The bowels had acted, but the motions were confined. Water was passed

in sufficient quantities, high colored, and loaded with lithates; it looked like the water of a sharp attack of jaundice. Menstrual functions normal, both as to quantity, quality, and regularity. Lungs normal. Heart excited; pulse 112, very weak. Temperature 102°. Previous to marriage she had been a cook and housekeeper, and had always been a hard-working woman. Had frequently suffered from attacks of indigestion. Once had inflammation of the lungs. Bowels acted regularly, but had always shown a tendency to constipation. I ordered large hot poultices smeared with laudanum to be applied to the abdomen, and to be frequently repeated; also

℞. Potass. bicarb . . . . . ʒij.
Tr. nucis vom . . . . . ʒss.
Sp. am. aromat. . . . . ʒij.
Aqua, ad . . . . . ℥viij.
M. ℥j, with powder, to be taken effervescing every four hours.

℞. Pulv. acid citric . . . . . grs. xij,
Ft. pulv mitte, viij.
Sig.—"Powders."

Ice to be used. Small quantities of milk, soda water, and mutton tea, to be given every two hours. For the night I ordered—

℞. Chloral hyd. . . . . grs. l.
Liq. morph. . . . . ʒss.
Syrup . . . . . ℥ss.
Aquam ad . . . . . ℥iij.
M. Half to be taken at bed time, the rest, if not asleep, in two hours' time.

This treatment relieved the sickness and diminished the pain and tenderness in the parts affected. The bowels remained constipated, being only very slightly moved every second day. There was no change in the size of the tumor. Temperature had fallen to normal. Pulse 72. Tongue cleaner, but still furred at the base. On the 6th of January, for the bowels, I ordered—

℞. Ol. ricini . . . . . ℥j.
Ess. limonis . . . . . ♏xx.
Tr. sengæ . . . . . ♏x.
Mucilag. tragacanth . . . . . ʒiij.
Aq. chloroformi ad . . . . . ℥iv.
M. Half the draught to be taken at once, the rest, if needed, in four hours' time.

January 7th. The oil had induced several good motions; some hard lumps were passed. The tenderness of the abdomen continues. Tongue cleaning. Improved in other respects. General treatment continued. Ordered—

℞. Mag. carb. . . . . ʒiss.
Mag. sulph. . . . . ℥j.
Sodæ bicarb. . . . . ʒj.
Tr. vin . . . . . ʒss.
Tr. zingib. . . . . ʒij.
Sp. am. aromat. . . . . ʒiss.
Aq. menth. pip., ad . . . . . ℥viij.
M. ℥j three times a day, until the bowels should be moved too freely, in which case the dose must be lessened, and taken at longer intervals."

Externally I ordered the following liniment to be well rubbed to the affected parts—

℞. Tr. opii . . . . . ℥ss.
Chloroformi . . . . . ℥iij.
Tr. belladonnæ . . . . . ℥ij.
Tr. saponis ad . . . . . ℥iv.
M. Sig.—Caution: Poison, for external use only. To be used as directed.

Poultices continued. This treatment was continued with benefit up to January 21st. She was able to be out of her bed by the 10th, and to come down stairs on the 17th. The bowels acted freely every day. The tumor was diminished by a third its size, and much less painful. It was still there however; her face lost the worn, drawn expression, which seemed to favor the idea of the presence of cancerous disease. Tongue quite clean.

21st. Out of bed; down stairs. Face free from all anxious expression; looks fuller and better than I have seen it for several years—three or four at least. She finds, however, that, when she attempts to walk about she cannot straighten herself properly. Still, she finds no difficulty in straightening out her leg. The pain shoots half way up the spine. Bowels regular. Urine sufficient, of a good color, and free from albumin or deposit. Pulse, 76; much better and stronger. Appetite improved. Eyes much clearer than they have been. Temperature, 98°. Changed her mixture to—

℞. Acid. nitro-mur., dil . . . . . ℥ij.
Tr. nucis vom. . . . . ♏xl.
Succis taraxaci. . . . . ℥j.
Sp. chloroformi . . . . . ℥j.
Syr. zingib. . . . . ℥vj.
Aquæ, ad . . . . . ℥viij.
M. ℥j three times a day. Liniment to be continued. Allowed fish, cutlet, or chicken for dinner.

26th. Has steadily improved under the above treatment. Tongue clean. Appetite good. No pain. Bowels regular. Face free from the anxious expression noted at first. Leaden color gone. Eyes clear, bright, and natural. Pulse, 76: much stronger. The lump in the iliac fossa no longer to be felt; deep pressure, however, induces pain, but not of a very unbearable character. Able to be out. Treatment continued.

February 1st. Improvement continues. The stiffness and pain in the back scarcely felt. Has walked over a mile, and not felt much the worse. Pressure still induces pain, but no lump can be felt. Feels stronger. Treatment continued.

5th. Feels pain still in the iliac fossa, increased by much movement. No lump is to be felt. Bowels quite regular in their action, being moved once freely every day. In other respects much improved. Complexion clearer, tongue clean, appetite good, urine normal, both as to appearance, and quantity, sleeps well.

℞. Sodii bromidi . . . . . ℥ij.
Tr. aconiti. . . . . ♏xl.
Sp. amm. aromat. . . . . ℥ij.
Succis conii . . . . . ℥vj.
Syrupi . . . . . ℥j.
Aquam ad . . . . . ℥viij.
M. ℥j. ter die.

The liniment to be continued, and linseed poultice to be applied at night.

15th. The last medicine has suited admirably, affording the most marked relief to the pain. Practically, she is convalescent, and requires no further treatment. Her only trouble is the old dyspeptic pain between the shoulders felt after meals; and, even this is much less than it used to be. She is able to resume her ordinary household duties.

Remarks.—When first seen, the question presented itself to my mind, "What is it?" The position of the tumor suggested: 1. Perityphlitis. 2. Ovarian mischief. 3. Fœcal obstruction and plugging of the cæcum. 4. Possibility of the tumor being malignant in its nature. For the first few days a close and satisfactory examination was impossible owing to the extreme tenderness, and pain experienced in handling it. When, however, the inflammation subsided, difficulties still remained in the way of arriving at a satisfactory diagnosis, as to the nature of the case. The regular action of the bowels before resorting to purgatives, and their free action after their use together with the persistence of the tumor, seemed to negative the idea of fecal accumulation. The age, complexion, general appearance of the patient favored the idea of malignant mischief. Deep seated abscess had also to be taken into account. It was decidedly one of these cases in which one had to suspend judgment and to rely upon the results of treatment which, so far, in this case, proved eminently satisfactory.—*John W. Martin, M. D., in Med. Press, May 18, 1887.*

The Pupil in its Semeiological Aspects.

In a very interesting paper by MACEWAN, in the *American Journal of the Medical Sciences* for July, 1887, the following conclusions are presented:

(A) 1. When the function of the brain is in abeyance, the pupils are in a state of stabile mydriasis.

2. This may arise either from temporary suspension or from abolition of function.

3. Temporary suspension is illustrated by shock, and the effect of some poisons; while the abolition of function is exemplified by extensive laceration and compression of the brain.

(B) 4. When the function of the brain is interfered with by conditions usually included under the term "irritation," the pupils are in a state of myosis; sometimes labile, but generally stabile myosis.

5. This "irritation" or interruption of function may be seen during certain degrees of cerebral anæmia, produced experimentally, and not as a pathological result; certain amounts of brain pressure, and certain stages of intracranial inflammation.

6. These are illustrated in persons who have suddenly lost a considerable quantity of blood (about a fifth of the whole); in the growth of intracranial tumors, and the formation of sanguinolent serous and purulent effusions, when the degree of pressure may be denominated as "medium," and at certain periods of meningitis and encephalitis.

(C) 7. The same pathological factors which cause myosis may also cause mydriasis, the degree in which these factors are present being the determining point between the former and the latter, and not *merely* the particular locus in the brain.

8. It is well illustrated by cases where the hemorrhage is repeated, and is finally pushed to syncope; in intracranial pressure, which is gradually increased until it becomes great, such as arises from tumors, blood-clots, and inflammatory products.

(D) 9. When the function of one-half of the cerebrum is placed in abeyance by a superficial or cortical lesion, the pupil on the same side as the lesion is in a stabile mydriasis.

10. This is well illustrated in cases of intracranial sanguinolent effusion consequent on injury (see list of cases).

(E) 11. When the function of one-half of the cerebrum is interfered with by some source of cortical irritation, the pupil on the corresponding side to the lesion is in a state of myosis.

12. This is illustrated by traumatic and pathological lesions affecting the cortex of the cerebrum.

(F) 13. Hemorrhage into the pons Varolii when small, causes strongly contracted pupils; but when it is more extensive, involving the gray matter beneath the aqueduct of Sylvius, a state of stabile mydriasis is induced.

14. Effusions into the lateral ventricles when small, produce contraction of the pupils, but when the effusion is great stabile mydriasis ensues.

15. Inequality of the pupils indicates a unilateral lesion or lesions.

16. When the lesion is cortical and unilateral the pupillary manifestations are on the corresponding side. When the basal nerves are affected unilaterally the pupillary effect is manifested on the same side as the lesion. When the lesion is unilateral and affects the function of the white fibres of the cerebrum the opposite pupil is generally affected. When the basal ganglia are implicated unilaterally the pupil is sometimes affected on the same side as the lesion, occasionally on the other side.

In a case of cholesteatoma and in another of glioma of the right optic thalamus, dilatation of the left pupil was found (*Ross*, vol. ii., p. 572).

In lesions of the cerebral peduncles the pupil is affected on the same side as the lesion.

Lesions in the corpora quadrigemina affect both pupils, irritation* causing contraction, destruction causing dilatation and immobility.

Section or destruction of one optic tract causes dilatation of the opposite pupil and blindness of the opposite eye.

17. Irritation of the cord, especially the cilio-spinal axis, produces dilatation of the pupils, while destruction of the cord causes contraction. These effects are generally seen in both pupils, though, experimentally at least, they may be confined to the same side as the lesion.

18. The pupils are affected in the same way by lesions of the sympathetic, though in unilateral lesions it is only the pupil on the same side as the lesion which is affected.

19. Speaking generally, when myosis is due to a cerebral cause, it indicates

* Unilateral electrical stimulation causes dilatation of both pupils, the opposite one becoming first dilated. Ferrier explains this as the result of irritation of a sensory structure, in this case acting through the medium of the anterior roots of the second dorsal nerves which ascend in the cervical sympathetic.

the earlier stages of various affections; when due to a spinal lesion it points to a most serious paralysis, often to the destruction of the part. When mydriasis arises from a cerebral lesion it is generally present in large amount; when due to a spinal affection it indicates irritation of the part.

MYOSIS OCCURS UNDER THE FOLLOWING CONDITIONS:

1. When a bright light acts upon the retina.
2. Accommodation for a near object.
3. Rotation of the eyeball inward.
4. Local irritation or painful affections of the eyeball.
5. Irritation of the oculomotor nerve.
6. Paralysis of sympathetic roots of lenticular ganglion or trunk of sympathetic in the neck. In paralysis of the fifth there is myosis and inflammation passing on to destruction of the eyeball.
7. Paralysis of the cilio-spinal region of spinal cord. All affections which destroy the cervical spinal marrow and intercept its conductibility produce congestion of the face and contraction of the pupils. In neurosis, which suspends or diminishes the tone of the sympathetic or spinal axis.
8. Encephalic congestion, such as: obstacle to return of blood in jugulars; venous congestion due to cardiac causes; active hyperæmia, plethora, fevers, pneumonia, hepatitis, etc.; when animal is suspended by the heels; in early stages of meningitis and encephalitis; in acute mania with marked activity of the cerebral circulation; in chronic mania pupils are variable, when contracted are said to indicate supervention of paralytic dementia.
9. During sleep; some believe this to be due to the congestion of the cerebral vessels and those of the iris (Mosso); others, to the inward rotation of the eyeball.
10. In the early stages of cerebral tumor.
11. In small hemorrhages into the cerebellum. In irritation of the cerebellum, contraction of the pupil on same side as lesion ensues.
12. Electrical stimulation of the angular gyrus frequently causes contraction of the pupil.
13. During forced expiration, when the eye is at the same time passive. Also generally seen during the period of apnœa in Cheyne-Stokes respiration.
14. Convulsions arising from meningo-encephalitis are said to be accompanied by myosis, while in convulsions due to epilepsy and in epileptiform fits they are usually accompanied by mydriasis.
15. When the eye contracts on accommodation to a near object, yet does not contract to light, this indicates a lesion situated between the corpora quadrigemina and the oculomotorius. This affection is known as the Argyle-Robertson symptom. It is seen in locomotor ataxia, and occurs in the progressive paralysis of the insane.
16. During uræmic coma.
17. Myotics: physostigmine, nicotine, pilocarpine, morphine, muscarine.

MYDRIASIS OCCURS UNDER THE FOLLOWING CONDITIONS:

1. In darkness or in subdued light.
2. Accommodation for distant objects.

3. Rotation of the eyeball outward.

4. In forced movements discharged from the medulla: vomiting, swallowing, chewing, forced respiration.

5. Paralysis of the oculomotor (accompanied or not by immobility of eyeball, external strabismus, diplopia, etc.).

6. Destruction of the optic nerve; amaurosis. When unilateral, associated movements continue.

7. Irritation of sympathetic; powerful impressions on sensory nerves; strong moral emotions, mental pain, grief, fear; neuralgia of the fifth nerve.

8. Irritation of the spinal cord, especially cilio-spinal region.

9. Encephalic anæmia: In all cases where there is reflex contraction of the vessels of the head; when loss of blood from the body is excessive; obstruction of the carotid arteries; in thrombosis of brain sinuses; dilatation of mesenteric vessels when extreme; syncope, intense cold, rigors; dyscrasias of the blood, convalescence, cachectic conditions; asphyxia, epilepsy, in certain stages of these affections.

10. Pressure of cerebrum when great in amount, as from hemorrhage, neoplasms, etc. In the last stages of meningo-encephalitis.

11. In cerebral softening. In acute dementia (œdema of cortex cerebri) observers state that the pupils are invariably dilated (Hutchinson).

12. In idiots the pupils are generally dilated.

13. During deep inspiration, generally in respiratory period of Cheyne-Stokes breathing.

14. Hemorrhage into centrum ovale and into cerebral peduncles.

15. Ferrier produced dilitation of opposite pupil by destructive lesion of the optic tract in the thalamus, indicative of rupture of the centripetal fibres to the irido-motor nucleus in the floor of the Sylvian aqueduct.

16. In hydrophobia there is mydriasis.

17. Mydriatics: atropine, homatropine, duboisine, daturine, hyoscyamine. Curare injected subcutaneously in animals (five to ten centigrammes) induces in one or two hours complete paralysis of the third nerve.

The Effect on the Pupil of Local Conditions of the Eyeball:*

1. Hyperæmia of the iris produces contraction of the pupil which darkness scarcely diminishes.

2. Presbyopia and hypermetropia cause contraction of the pupils in cases where continuous and excessive strain for near accommodation has been long continued, and has produced asthenopia.

3. Pupillary atresia, consequent upon chronic irritation with posterior synechia, producing contraction of the pupil.

4. In synechia total dilatation is impossible, the iris only dilating where free, hence, the pupil is irregular. If the synechia is annular the pupil is both contracted and immobile.

5. In microria there is a congenital state of extreme contraction.

* The writer is indebted to Dr. Thomas Reid for revising this list of pupillary effect occasioned by local conditions of the eyeball.

6. In glaucoma the pupil is dilated, contracting little or not at all to the action of calabar bean.

7. In coloboma, both in the congenital form and after iridectomy, there are irregularity and immobility of the pupil.

8. In idiopathic mydriasis there is little contraction to the action of light or to myotics.

9. In certain cases of amblyopia and amaurosis there is dilatation of the pupil.

10. In hippus pupillæ there are alternate contraction and dilatation often accompanied by nystagmus.

11. Inequality of the pupils exists in some who have different degrees of refraction in the two eyes, one being emmetropic and the other myopic.

The Forms of Albumen in the Urine, and Their Tests.

Dr. T. Grainger Stewart, physician in Ordinary to the Queen for Scotland, in a lecture at the University of Edinburgh (*Edinburgh Med. Journal*, May, 1887), gave the following account of the forms of albumen found in the urine, and the results of a careful and prolonged inquiry which, along with Dr. Stevens, he has made as to the comparative delicacy of the leading tests for serum albumin, and as to the value of the different methods of quantitative analysis by which the amount of albumen may be determined.

The forms of albumen met with in the urine are:—

I. *Serum Albumen*, a substance which, according to Hammarsten, constitutes 4.516 per cent. of the blood serum. It is almost constantly present in urine which contains any variety of albumen. Although a less diffusible body than serum globulin, it is capable of passing through membrane.

II. *Serum Globulin or Paraglobulin*, the globulin of the blood serum, of which it constitutes 3.103 per cent. It is met with in almost all albuminous urines, its proportion to the serum albumen varying in different instances.

III. *Peptone*, a product of gastric and pancreatic digestion of albuminous substances, also occurring in the process of transformation of tissues and of inflammatory effusions. It is a readily diffusible substance, occasionally met with in the urine in association with or apart from serum albumen.

IV. *Propeptone*, *Parapeptone*, *or Hemialbumose*, a substance or group of substances intermediate between albumen and peptone, constituting a stage or stages of transformation from the one to the other. It is highly diffusible, and is occasionally met with in the urine under conditions corresponding to those under which peptone occurs. This is the peculiar form of albumen which was discovered in the urine by Dr. Bence Jones in a case of osteomalacia.

V. *Acid Albumen, or Syntonin*, one of the derived proteids obtained by the action of acids upon albumen. It is easily produced artificially by the addition of acid to albuminous urine, but may occur naturally in certain cases.

VI. *Alkali Albumen*, another derived proteid, produced by the action of alkalies upon albumen. It is readily produced artificially, but is also found naturally in the urine.

VII. *Hæmoglobin*, the combination of hæmatin and globulin naturally existing in the red corpuscles of the blood. It sometimes appears in the urine, particularly in cases of hæmaturia and hæmoglobinuria, also in certain septic condi-

tions, and after inhalation of arseniuretted hydrogen, transfusion of blood, and otherwise.

VIII. *Fibrin*, a proteid substance which does not normally exist as such in the blood. It is met with in the urine in hæmaturia, in some cases of chyluria, and in certain varieties of renal casts.

IX. *Mucin*, the chief constituent of mucus, is a derived proteid substance. It frequently becomes superadded to the urine after secretion, and may be derived from any part of the urinary tract.

X. *Lardacein*, *Waxy or Amyloid Material*, familiarly known as a pathological substance within the body, is said to be occasionally demonstrable in renal casts.

Of these ten varieties the last four are of little practical importance—mucin alone being indeed worthy of special comment, and that mainly because of the difficulties which its presence raises in regard to the reliability of certain tests for serum albumen.

As to the tests for the albumens, he puts in tabular form the chief tests for the different varieties of albumen, with their actions upon each variety.

The oldest test for albumen depends upon *its coagulability by heat*. Heat coagulates the serum albumen (opalescence occurring at 60° C., coagulation at 72° to 75°), and also the serum globulin (opalescence occurring at 68° C., coagulation at 75°); has no effect upon the peptones, propeptones, nor upon acid or alkali albumen, unless an alkali or acid has first been added. It, however, produces cloudiness with phosphates, by driving off carbonic acid, which holds them in solution, and the further addition of nitric acid, by redissolving them, clears up the opacity. A preliminary acidulation with acetic or nitric acid prevents this cloudiness, but may convert albumen into acid albumen, and so make the test fail. But on the whole, if cautiously employed, heat will be found a good test. A further security may be obtained by using both acetic acid and a concentrated solution of magnesium sulphate, or of sodic sulphate, or of common salt, for these prevent the undue action of the acid upon the albumen.

TABLE I.—SHOWING TESTS FOR THE CHIEF FORMS OF ALBUMEN.

	Serum Albumen.	*Serum Globulin.*	*Peptones.*	*Propeptones.*	*Acid Albumen.*	*Alkali Albumen.*
Heat.	Opacity.	Opacity.	0	0	0	0
Heat with nitric acid.						Opacity.
Heat with acetic acid.						
Cold, nitric acid.	Opacity.	Opacity.	0	Opacity dissolved by heat.	Opacity.	Opacity.
Metaphosphoric acid.	Opacity.	Opacity.	Opacity diminished or dissolved by heat.	Opacity diminished or dissolved by heat.	0	Opacity.
Acidulated brine.	Opacity.	Opacity.	Opacity diminished or dissolved by heat.	Opacity diminished or dissolved by heat.	Opacity.	Opacity.

TABLE I.—SHOWING TESTS FOR THE CHIEF FORMS OF ALBUMEN (*Continued*).

	Serum Albumen.	*Serum Globulin.*	*Peptones.*	*Propeptones.*	*Acid Albumen.*	*Alkali Albumen.*
Picric acid.	Opacity.	Opacity.	Opacity dissolved by heat.	Opacity dissolved by heat.	Opacity.	Opacity.
Potassio-mercuric-iodide.	Opacity.	Opacity.	Opacity dissolved by heat.	Opacity dissolved by heat.	Opacity.	Opacity.
Potassium ferrocyanide.	Opacity.	Opacity.	0	Opacity dissolved by heat.	Opacity.	Opacity.
Dilution with water.	0	Slight opacity.	0	0	0	0
Magnesium sulphate.	0	Opacity.	0	0	Opacity.	Opacity.
Fehling's solution.	Brownish-red or mauve.	. .	Rose pink or purple.	Rose pink or purple.		
Randolph's test.	. .	. .	Yellow opacity.	Yellow opacity.		

The *Cold Nitric Acid Test* ranks next in date of introduction and in general popularity to that by heat. When a layer of nitric acid is brought into contact with a layer of urine, a white coagulum is formed at the line of junction of the fluids. The acid coagulates serum albumen, serum globulin, has no effect upon peptones; gives an opacity with propeptones, which, however, disappears with heat; has no effect upon acid albumen, but gives distinct reaction with alkali albumen. One or two sources of fallacy must be kept in view when one employs this test. It may give a precipitate with urates, with urea, or with resinous substances. Such fallacies may be avoided by the adoption of very simple precautions, which are fully detailed in the books on urinary analysis.

Metaphosphoric Acid is an excellent test for albumen, but as it is only serviceable when pure, and difficult to keep in that condition, it has not come into general use.

Acidulated Brine is also a test of considerable value, acting upon all varieties of albumen, but it is not likely to become greatly trusted, because of its frequently giving some reactions with normal urine.

Picric Acid is a test which has been brought into use in Great Britain mainly by the recommendation of Dr. George Johnson. It produces an opacity with all the forms of albumen; but while those with serum albumen, serum globulin, acid and alkali albumen persist or become more distinct with heat, those with peptone and propeptone dissolve. It must be remembered, also, that alkaloids, such as quinine, give a cloud with this reagent, but one which rapidly disappears with heating. On the whole, I believe this to be most reliable and delicate test which we at present possess.

It has been objected to the test, that it precipitates mucin as well as serum albumen, and that this is a source of fallacy, particularly when it is used by the contact method. Careful investigations by Prof. Stewart showed that, while a large number of the specimens gave distinct reactions both with picric and citric

acids, there were three which gave an opalescence with picric and not with citric, and seven of those which reacted with citric acid gave no reaction with picric. From these facts he concludes that mucin may be demonstrated by citric acid when no reaction is produced with picric, and that picric may show minute quantities of albumen in urines in which citric acid fails to show mucin.

On the other hand, picric acid often produces an opalescence in urine apparently free from albumen, and Dr. Stevens made a series of careful experiments which seem to indicate that picric acid acts upon mucin, although more slowly and less distinctly than does citric acid. The degree of acidity of the urine is probably an important element in relation to this reaction with picric acid; and Prof. Stewart thinks that where acid is present in quantity the opalescence is distinct, where it is in slight amount it is comparatively or completely absent.

It is likely that although picric acid often affects mucin, it does not do so in such a way as to render it unreliable as a delicate test for albumen. Its precipitate with mucin is, even when applied by the contact method, a slight, slowly developed haze. A precipitate indicating albumen is more marked and more quickly produced. A little practice in the use of the test will soon render any one familiar with the degree and rate of formation of the opacity which indicates albumen as distinguished from those which mark the presence of mucin.

Potassio-Mercuric-Iodide, which was first proposed as a test by M. Tanret, corresponds in its action to picric acid, giving opacity with serum albumen, globulin, acid and alkali albumen, and an opacity dissolved by heat with peptone and propeptone. But it will be found to give a reaction with a very large proportion of normal urines, and as the addition of an organic acid—citric or acetic—is required to bring out the reaction, it is clear that mucin must, in many cases, give a degree of opalescence. It may be that other sources of fallacy exist in regard to those slighter reactions. Dr. Oliver's method of applying this test greatly reduces the chances of error, but its disadvantages render it an inferior test to the picric acid.

Potassium Ferrocyanide, first suggested by Dr. Pavy, also resembles picric acid in its action, except it does not give any indication with peptones. The objections which induced Prof. Stewart to reject the reagent last described apply to this one also.

Dilution with Water is a convenient but not very reliable test of the presence of serum globulin, as it produces a milkiness, that substance being soluble in weak saline solutions, but not in pure water or extremely diluted solutions of salts. It produces no effect upon other forms of albumen.

Magnesium Sulphate is a valuable test for serum globulin, as it produces a milky opacity with that substance, which speedily deposits as a precipitate. It has no action upon serum albumen, peptone or propeptone, but produces an opacity with acid and alkali albumen. It is best used in saturated solution by the contact method. By its use also, according to methods described in works dealing with the subject of physiological chemistry, the globulin may be separated nearly pure, and its amount determined.

Fehling's Solution, or other alkaline solution of copper, is a most convenient test for peptone and propeptone, giving with these a rose pink or purple color at the point of contact of the test with the supernatant urine, and producing no ef-

fect upon the others, with the exception of serum albumen, with which it gives a brownish-red hue.

Randolph's Test for peptone and propeptone, which consists in the addition of one drop of saturated solution of iodide of potassium and then of two drops of Millon's reagent (an acid solution of nitrate of mercury) to a drachm of urine, gives a yellow, instead of a red, precipitate when these substances are present; but, as Randolph has pointed out, it gives the same color reaction with bile salts, which are frequently present in considerable amount in the urine. Therefore we cannot esteem it so highly as the copper and alkali test.

The presence of hæmoglobin may be made out by the guaiac reaction or by the spectroscope; the presence of fibrin may be ascertained by its decomposing with effervescence hydrogen peroxide; mucin may be discovered by means of citric or acetic acid; and waxy material may be shown (if it is ever present) by iodine, iodine and sulphuric acid, or by methyl-aniline violet.

Table II. I show you the results of tests as to the relative delicacy of the principal tests for albumen. The first column shows the dilution up to which the action of each reagent remained distinct; the second shows the percentage of albumen, as calculated from the total quantity in the undiluted fluid and the number of dilutions; and the third shows the grains, or parts of a grain, per ounce as calculated from the same data:

TABLE II.—*Showing the Comparative Delicacy of Tests for Serum Albumen.*

TESTS.	DILUTIONS.	PERCENTAGE.	GRAINS PER OUNCE.
Boiling	300	0.0005	0.00218
Acidulation with acetic acid, and boiling	500	0.0003	0.001311
Cold nitric acid	50	0.003	0.01311
Metaphosphoric acid	500	0.0003	0.001311
Picric acid	1000	0.00015	0.000655
Potassio mercuric iodide. (Test papers)	500	0.0003	0.001311
Ferrocyanide of potassium	500	0.0003	0.001311

The urine contained albumen to the amount of 1.5 grammes per litre, which is equal to 0.15 per cent., or 0.655 of a grain per ounce.

The results show that the *boiling test*, carefully applied, is an excellent one, revealing the presence of so little as 0.00218 of a grain per ounce, and continuing to show up to the 300th dilution of the standard specimen. But heat, with preliminary acidification with a little acetic acid, was still more delicate, showing 0.001311 of a grain per ounce, and giving a perceptible haziness up to 500 dilutions.

The *Cold Nitric Acid Test* falls far short of this in delicacy, for it does not give a distinct reaction beyond the 50th dilution, and therefore shows only with 0.01311 of a grain per ounce. It is true that if the specimen is allowed to stand, the reaction may gradually manifest itself, with minute traces of albumen; but

this is inconvenient, and for practical use tests are to be estimated in proportion to their rapidity of action.

Metaphosphoric Acid gave the same results as heating after acidulation with acetic acid, viz., showing till the 500th dilution of the standard urine, and 0.001311 of a grain per ounce.

Picric Acid proved the most delicate test, giving a faint but perceptible reaction up to the 1000th dilution of the standard specimen, which is equal to 0.00015 per cent., or 0.000655 of a grain per ounce.

The *Potassio-mercuric Iodide* and the *Ferrocyanide of Potassium Tests* gave the same results as metaphosphoric acid, showing albumen up to the 500th dilution of the standard specimen, equal to 0.001311 of a grain per ounce.

From these and other observations Prof. Stewart concludes that picric acid is the most delicate of all the reagents which we possess for albumen, and that next to it rank the potassio-mercuric iodide, the heating after acidulation with acetic acid, the ferrocyanide of potassium, and the metaphosphoric acid. Boiling and adding nitric acid is less delicate, and still less so is the cold nitric acid test.

But delicacy is not the only quality required of a test. Indeed, a test may be too delicate for practical purposes. And again tests otherwise suitable may be practically inconvenient. Nitric acid is difficult to carry about, and picric acid presents a similar disadvantage, although in a minor degree. The test pellets devised by Dr. Pavy, of London, and the test papers of Dr. Oliver, of Harrogate, are extremely convenient, being easily carried about, and very delicate. But it may be held that they are too delicate, for few urines fail to show some reaction with them. Indeed, many of them show some reaction with practically normal urines. The smallest quantity of mucin may suffice to produce the reaction, or a quite infinitesmal trace of albumen proper. The tests must be used with discrimination, and too much importance must not be attached to their fainter indications. Albuminuria is rarely a serious condition unless it is sufficiently pronounced to be made out by the cold nitric acid test.

As to the quantitative analysis of albuminous urine, Prof. Stewart approves most highly of the coagulating, drying and weighing process. A less laborious process is that known as Esbach's Method. This plan requires certain special tubes, graduated so as to show the height to which the urine to be tested, and that to which the reagent (a solution of picric and citric acids) should reach, also the number or proportion of grammes per litre. The urine is filled up to the level indicated by the letter U, then the test fluid to the line marked R, and the fluids having been thoroughly mixed, are set aside to stand for twenty-four hours. At the end of that time the level reached by the coagulum enables us to read off the the grammes per litre. Our observations brought out a result, as is seen in the table, of 2.5 grammes per litre, which is equivalent to 0.25per cent., or 1.0837 grains per ounce. It thus very closely corresponded to the results obtained by the first method.

Esbach's method brings out results closely corresponding to those obtained by the elaborate drying and weighing process. As the method is easily worked, as well as so reliable, it is a good one to adopt. Its only disadvantages are that one must wait twenty-four hours before the result can be obtained, and that it does not enable us to measure less than 0.5 grammes per litre.

IV. OBSTETRICS, DISEASES OF WOMEN AND CHILDREN.

Prevention of Pendulous Abdomen.

Dr. BAELZ ascribes the absence of this deformity in Japanese women to the fact that in the later months of pregnancy they wear a soft, well-fitting abdominal bandage, which, after delivery, they pad well with cotton, so as to fit the body, and wear some fourteen days longer.

Cocaine in the Uncontrollable Vomiting of Pregnancy.

In the *Centralbl. f. Gynaekol.*, Dr. ENGELMANN reports the case of a woman twenty-five years of age, who, in the third month of pregnancy, became extremely emaciated and exhausted from uncontrollable vomiting. As all other means had failed, the author prescribed ten drops of a ten per cent. solution of cocaine three times a day. The vomiting abated at once and soon ceased entirely. In two other, but milder cases, the remedy was equally successful. No untoward symptoms appeared.

Ununited Fracture of the Clavicle in an Infant; Resection and Wiring of Fragments.; Good Union.

The fracture occurred about four months before the case came under observation by POLLARD. As the child, then eleven months old, was at the time in poor health, nothing was done for the injury.

The operation of resection and wiring was done under antiseptic precautions, and good union was obtained. The wire came away on the twenty-fourth day, and three weeks later the parts were soundly healed, and the arm could be used freely.—*Brit. Med. Journal*, March 23, 1887.

Sterility from Obesity.

A. BROUDEL'S case was of a Jewess, 28 years of age, that had been married eight years, during which time she had suffered from extreme obesity. After a course of treatment reducing her weight 20 kilogrammes (44 lbs. avoir.) she became pregnant and completed the period of gestation normally. The delivery was a protracted one. To relieve her sufferings faradization was resorted to, strychnine with atropine and cocaine, and finally the forceps. The pelvic diameters are not given. The child had club-feet, crippled hands, contracted right biceps, and a large spina bifida. The mother's recovery was normal.—*Centralbl. f. d. Med. Wissensch., May 14, 1887.*

A Case of Gastrotomy for Extra-uterine Gestation in which the Placenta Never Came Away.

Dr. BRAITHWAITE records (*Lond. Obst. Trans.*) a case where he performed abdominal section for extra-uterine gestation. The fœtus was full-grown, had been dead for three weeks, and was lying quite free in the abdominal cavity, except that a fine membrane cut it off from the intestines which lay above it. The placenta covered the top of the uterus, was not removed, and, so far as could be made out, did not come away afterward. When the patient was examined bimanually some time after the operation, no trace of it could be felt, unless as a small ring of dense tissue at the level of about half an inch from the fundus uteri.

A Case of Removal of Both Ovaries During Pregnancy.

Mr. KNOWSLEY THORNTON (*Lond. Obst. Trans.*) records a case where he removed both ovaries at the fourth month of pregnancy. The operation was performed in the usual manner, the ligatures being placed on the pedicles as far from the uterus as possible. This was done with the intention of avoiding the metrostaxis which usually comes on when both ovaries and tubes are removed, as it might hence set up abortion.

The patient recovered, and was delivered at the eighth month of gestation of a healthy child; the third stage was normal. Lactation was performed satisfactorily, altough the uterus was atrophic four months afterward, and the mother had the usual menopause phenomena. The case further shows that the ovaries can have no influence in starting labor.

The Mechanism of the Third Stage of Labor.

From a study of seventy cases, Dr. CHAMPNEYS gathered the following points: 1. Moderate hæmorrhage was normal to the third stage of labor. 2. The placenta presented in the great majority of cases by a point on the amniotic surface. 3. The presenting point was almost invariably near the lower edge of the placenta. 4. The position of the presenting point varied with the position of the placenta. 5. The "inversion" of the placenta was not due, in the great majority of cases, to traction on the cord, but was part of the natural mechanism. It was probable, therefore (1), that, in addition to the reduction of the placental site, some escape of blood played a part in the ordinary mechanism of placental detachment; (2) the slight inversion of the placenta which did take place was probably due to this cause; (3) the effusion of blood was not, in ordinary cases, sufficient to form a large mass bulging into a large uterine cavity behind the placenta.—*Brit. Med. Jour., April 16, 1887.*

Rumination in a Child.

M. LE JUGE DE SEGRAIS (*Jour. de Méd.; Brit. M. J.*, April 30,) gives the case of a boy eleven years old who had contracted the habit of causing food to return into the mouth, in order to renew the pleasure of anything the taste of which he liked. To effect this, he first recalled the taste of whatever he had most enjoyed at a meal, held his breath, and, by contraction of the abdominal muscles, brought the food into his mouth; he occasionally did this a second time. The stomach was found to be slightly dilated, but made no rumbling sound; the child was

pale and rather anæmic. He had formerly lived in the country, where milk was his principal article of diet; the stomach became overloaded and regurgitation ensued; the child became accustomed to this, and thus the habit of rumination was formed. Various means of cure have been tried without success, and it is now proposed to wash out the stomach with Faucher's apparatus and apply the actual cautery to the epigastric region.

Fœtus and Placenta of Extra-uterine Gestation Removed by Abdominal Section.

Dr. HERMAN describes (*Lond. Obst. Trans*) a case where he removed an extra-uterine fœtus by abdominal section. The fœtus lay enclosed and adherent to its membranes, the liquor amnii having been absorbed. The placenta was attached to the anterior abdominal wall, upper surface of bladder, and left broad ligament. Dr. Herman tied and divided muscular adhesions between placenta and omentum, and separated by tearing the placenta from the bladder and abdominal wall. The part of the placenta adherent to the broad ligament was treated by tying the latter in two parts, and then cutting away the placenta. In this way the ovary had to be removed.

The fœtus weiged 3 pounds 8 ounces, and was compressed and flattened. The weight of the placenta was 28½ ounces; the cord was shrivelled, and the placenta seemed made up of placental tissue with extravasated blood between the tufts.

Congenital Occlusion of the Pharynx.

An account is given of a case reported by a Spanish practitioner, DON ILLERA, in which a newly-born child could not be taught to suck, and whose mouth, on the introduction of the finger, grasped it like a ring. The middle third and edges of the tongue were found to be connected to the superior alveoli by firm adhesions, which prevented the organ from being depressed. Two small tumors besides were situated on the palate, near the arch, which so effectually occluded the passage as to make the swallowing of liquids almost impossible. No operation was allowed until the fourth or fifth day, when the child seemed likely to succumb from sheer inanition.

The tumors were seized by the forceps and cut off at their bases, and the bleeding surfaces touched with the actual cautery. The adhesions of the tongue were then divided, and in a few hours the child could swallow milk easily. It ultimately attained complete use of the tongue.—*Lancet*, April 9, 1887.

An Analysis of Seventy-Three Cases of the Insanities of Pregnancy, Parturition, and Lactation.

We find that the insanity of pregnancy is the least frequent of the three forms of puerperal insanity, and that the disorder tends to develop in the later rather than in the earlier months of gestation; that the type of insanity is as often mania as melancholia, at least in asylum practice; that whilst the majority of the cases recover, the curability is nevertheless distinctly below that of the other forms; and that when recovery takes place the influence of parturition is seldom manifestly beneficial at first, and may even have a contrary effect.

The most salient points in connection with the insanity of parturition are—

that it occurs most frequently in primiparæ, and that the immense majority of cases commence within the first three weeks after parturition; that the form of mental disorder is more frequently mania than melancholia, and that the percentage of recoveries is high, amounting to about three-fourths of the whole number.

We find that women in the first lactation are not specially subject to insanity, the tendency being rather the other way, but that the affection tends to commence in the earlier rather than in the later months of any given lactation; that the form of mental disorder is melancholia more frequently than mania, and that the percentage of recoveries is very high, considerably exceeding that which obtains in either of the forms of puerperal insanity previously considered.—*Tr. Liverpool Med. Instit.*

The Treatment of Foreign Bodies in the Nose.

The following rules are laid down by HUNT:

1. In all cases of discharge from the nose (especially if fetid or unilateral) cleanse the cavities thoroughly by means of sprays, syringing, or forceps, as a preliminary step.

2. Examine the nasal fossæ completely by means of a speculum and mirror. It is not sufficient to raise the tip of the nose with the thumb and look in. If no nasal speculum is at hand, extemporize one by bending a common hair-pin about an inch from its rounded end.

3. Having detected a foreign body, do not try to remove it by douching through the opposite nostril, as there is danger of the fluid entering the middle ear by the damming back of the current on the obstructed side. This is not a theoretical objection.

4. When the foreign body presents a sharp edge, extraction is best managed by forceps. A rounded body, especially when covered by mucus, will probably slip from the grasp of the forceps; it is best removed by passing a bent probe or scoop behind it and dragging it forward. The above rules apply equally well to the removal of bodies recently introduced.

The skilful use of the forceps or probe is even less objectionable than the "pinch of snuff" treatment.

Cocaine is of great value, not only in producing local anæsthesia, but in contracting the spongy tissue over the turbinated bones, facilitating thus examination and extraction.—*Glasgow Med. Journal*, March, 1887.

The Pathology of Chronic Inflammatory Disease of the Uterine Appendages, as Illustrated by the Preparations of Sixty-three Cases Removed During the Year 1886.

Mr. LAWSON TAIT gives, in the *Brit. Med. Jour.* of April 16, 1887, his views of the pathology of chronic inflammatory disease of the uterine appendages, as illustrated in a series of 63 cases operated on by him during 1886.

Mr. Tait recognizes five classes of cases, as follows: First, catarrhal; secondly, those produced by the exanthemata at the time of puberty; thirdly, gonorrhœal cases; fourthly, those occurring from inflammatory mischief in the post-puerperal state; and, lastly, cases where the uterus is infantile, and the appendages disorganized by inflammatory action.

The following are the statistics of the 63 cases: There was only one death. The gonorrhœal and post-puerperal cases preponderate, inasmuch as 53 of the women were married, and in 8 of the unmarried the cause was undoubtedly gonorrhœa. One case of double pyosalpinx followed the prolonged use of intra-uterine pessaries intended to remedy an anteflexion.

In every case there was no possibility of the woman becoming pregnant, as in the majority the trumpet of the tube was found glued to the ovary; in others the fimbriæ were coalesced, the ovary remaining free.

In one-third of the cases the exanthemata, usually scarlet fever, had caused the inflammatory condition. The condition of the tubes varied. In the early stages they were intensely congested and friable; in the later cases the appendages were cirrhotic, and few Graafian follicles were present in the ovaries. The nature of the fluid contents varied, but was either cheesy or serous. He did not believe this had much bearing in determining the patient's suffering; this was due to the adhesions.

Lactation and Electricity.

Dr. AUBERT (*Rev. de Thérap.; Lond. M. Rec.*, May,) gives the case of a woman who had nursed her child for eleven months, when an attack of pneumonia interrupted this method of feeding. Two days later, when the infant was well enough to recommence, the secretion had completely ceased. This state of things persisted for a fortnight, during which the child, who refused other food, rapidly lost weight. It occurred to Dr. Aubert to try the effect of local faradization. The electrodes, well saturated with moisture, were placed right and left of each breast, and the current was graduated so as not to cause contraction of the pectoral muscles nor pain. After the first *séance*, which lasted twenty minutes, the right breast had evidently increased in size. The second day a few drops of milky fluid exuded, and on the third day a spontaneous flow took place in both breasts.

A second observation is reported by Dr. Becquerel in a woman of twenty, in whom the lacteal secretion had been arrested in consequence of reiterated and intense mental emotion. After eight days suppression three *séances* of twenty minutes' duration sufficed to re-establish the secretion, which then continued in a normal way. The same result was obtained quite unexpectedly in a woman, seven months after her confinement, where the arrest of the secretion had been immediate.

M. Pierron has treated a number of cases by this method, and always with complete success. The mode of operating consists in placing the positive electrode, having the form of a spherical cup, over the nipple, while the negative electrode, terminating in a ball, is placed below the breast. In this manner the orifice of the gland is the first to be excited. Afterwards, the positive electrode is moved over the entire surface of the gland, while at the same time the negative electrode is displaced in such a way that the former will converge towards the latter. The current should not be strong enough to excite pain. Each application should last ten minutes, and be renewed every twenty-four hours, until milk is obtained, which rarely fails to appear after the fourth application. M. Pierron thinks that the application of electricity in this manner would produce lacteal secretion even in virgins.

Operations for Phimosis as a Means of Cure or Relief of Some Nervous and Other Symptoms.

Phimosis and adherent prepuce give rise to varied troubles of more or less gravity, manifested either in the muscular, osseous, or nervous systems, and removal of these abnormal conditions frequently affords marked relief and sometimes perfect and permanent cure. This opinion is justified by Magruder's experience of largely over one hundred cases, in the vast majority of which relief was obtained. Generally, circumcision and breaking down of adhesions were the only measures employed; occasionally tonics, as malt, cod-liver oil, and hypophosphites, and, in obstinate cases, electricity.

Has found phimosis or adhesions almost constant in a great variety of disorders; impaired locomotion due to atrophy, and manifested by weakness and stumbling; incontinence of urine; hip-joint disease; pain in voiding urine; talipes valgus or equino-varus, which he notes is rare in girls; headache and palpitation on least exertion; hernia; laryngismus stridulus; convulsions, restlessness, and irritability; in one case of a child only six weeks old, constant priapism with screaming and convulsions. These all in children of from one week to thirteen years.

This reflex spasm and paralysis is familiar to practitioners in diseases of the digestive tract, ovaries, uterus, and urinary organs. Why not from genital irritation? The writer quotes in support of these statements, observations of A. M. L. Hamilton, Henoch, and Erichsen. Experimental irritation of cutaneous nerves by varnish, etc., produces reflex paralysis of the centres of vascular innervation in cord. If this follows from irritation of cutaneous nerves, why not from irritation of the branches of pudic nerve? Drs. Otis, Seguin, Hammond, Black, and Sayre have associated preputial irritation with a variety of disorders. Barwell found phimosis in eighty-three out of one hundred cases of hip-joint disease, and elongated prepuce in eleven of the rest. In only six was the penis normal. He also notes that in a Jewish hospital very few such cases are reported in children. This is more than a coincidence. Says Erichsen, "Every child who has congenital phimosis ought to be circumcised, and even those who without it have long and lax prepuce would be greatly improved in cleanliness, health, and morals by the same operation."—*Journal of American Medical Asso.*, April 9, 1887.

The Origin of Erosions on the Crowns of Teeth.

Busch, as a result of his experience, believes that defects in the enamel of the teeth, which are commonly known as erosions, are due to certain laws, not only with reference to their localization upon the crown, but also with reference to their occurrence upon particular teeth in the set. These furrows and depressions affect only the superficial portions of the crown, while the part which is near the root may always retain its normal consistency. These erosions never affect a single tooth or several teeth without any regard to position or other conditions, but always affect, in any given case, those which are developed in the jaw at the same period, and hence those groups are most frequently and most decidedly affected whose crowns develop earliest. The first molar stands foremost in the list, its crown being partly developed as early as the time of birth. The incisors and canines come next, their crowns developing during the first few

months of life. The bicuspids are seldom eroded, their crowns developing, for the first, at the end of the second year of life, for the second, a year later. The last two molars, the crown of the first of which begins to develop at the end of the fourth year, and the second between the eighth and ninth years, are always free from erosions. The milk-teeth may be of irregular form and bad structure, but they never show the peculiarity of the erosion. Hutchinson's assumption that erosions are attributable to syphilis is considered unwarranted, as otherwise they should appear upon the milk-teeth. That assumption also leaves unexplained the fact that the erosions appear upon particular groups of teeth, as has been already stated. They are also absent in many cases of undoubted hereditary syphilis, and present in many individuals in which no trace of hereditary syphilis is discoverable. In hereditary syphilis, rachitis, and scrofula, the milk-teeth are apt to be soft and friable, but the erosions of the permanent teeth cannot be explained as peculiarities of those diseases. The author believes that they are the result of disease which affects the individual at the time that the crowns are beginning to develop. Among the diseases which may have such an influence, eclampsia, meningitis, and severe attacks of choking in consequence of whooping-cough (for example) are mentioned. A single severe attack of convulsions in the first year of life might be sufficient to produce erosions on the teeth, the crowns of which were developing at that time. The theory is that the disease would cause a temporary suspension of the growth of the tooth, that it would soon begin again to grow vigorously, but that the interval would be marked by a furrow or erosion. After the first year of life cerebral disorders are much less frequent, and hence the infrequency of erosions upon teeth which are developed after that time. As erosions are believed to be so frequently caused by convulsive conditions, the author suggests the propriety of speaking of *teeth convulsions*. From one to two per cent. of all human beings have erosions on the teeth. A tendency to caries is manifest when they are present.—*Archives of Pediatrics*, May, 1887.

The Elastic Ante-Partum Bandage.

Henry V. Gray, M. D., Professor of Anatomy and Physiology, Roanoke College, Va., writes:

"Meddlesome midwifery is bad," said Rudolph Wagner, long years ago, the force of which the conservative physician of the present day fully recognizes. In a case of labor, to be constantly pressing and squeezing over the bowels and obstetrically sheathing and unsheathing the hand, is entirely useless, and well calculated to do your patient much harm. Unless you apply equable, continuous, and reasonable pressure, you will invite a spasmodic action of the uterine muscles or a breach in coördination, which will retard labor and increase the danger, both to mother and child. Better for the patient that her physician should be paralyzed in both arms than such mischievous meddling.

If you will take a peep at the anatomical relations of the uterine muscles, you will more readily appreciate my meaning. But every one will agree that our patient can be assisted, and this ante-partum bandage is just what is needful.

By using it, say from the sixth to the ninth month, you will gain many advantages. If there should be any obliquity of the womb, which is so frequently the cause of shoulder and arm presentations, you will have a good chance to correct

them before the time of labor. By its equable pressure there will be much less danger of miscarriage, and the patient will suffer less with nervousness. Used at or near the time of labor, it will act as a tonic; and should a portion of the waters escape before the regular pains of labor, it will give the necessary pressure. After regular labor pains come on it will prevent recession of the presenting part of the child, causing fixation, and bring about more rapid dilatation of the os uteri and delivery. The forceps can be more easily applied, and it will lessen the danger of perineal rupture, as the pressure will be regular and continuous. There will also be less danger of hemorrhage, fainting, or convulsions. After delivery of the child, it will cause a natural extrusion of the placenta, without resorting to Credé's or other methods. Should the after-birth (placenta) clear the womb and pass into the vagina, slight traction or elevation of the patient upon a chamber will release it. The elevation of the patient upon a chamber is very necessary to clear the mother of all clots, which is one great cause of blood poison. I can honestly say, that after an experience of upwards of twenty years, with a reasonable share of practice, I have never lost a parturient patient, nor have I ever had to contend with any serious cases of puerperal fever; yet I have never used intra-uterine or vaginal injections, antiseptic or otherwise, which are now so foolishly and in many instances detrimentally used by the fashionable physician. Clear the womb and vagina of clots by a suitable bandage applied before labor, and let your patient stool when occasion calls, and all will be well.

The material required for bandage is simply an elastic (open-meshed) front piece, and an ordinary cotton cloth band for back, with straps and buckles to tighten or renew when soiled.—*Virginia Med. Monthly, June, 1887.*

On Mercurialism in Lying-in Women Undergoing Sublimate Irrigation.

DAKIN, in the *Lond. Obst. Trans.*, makes a valuable contribution to the question of mercurialism following the use of corrosive sublimate as an antiseptic. As is now well known, Tarnier, in 1882, was the first to use this drug as an antiseptic in puerperal cases. The general outcome of its use has been a great diminution in the mortality and morbility of maternities, a result somewhat clouded by occasional cases of poisoning with even fatal results, as many as eight deaths having been reported. The cases known are as follows:

1. *Stadtfeldt's Case.* One intra uterine injection, 1:1500, five days after labor. Death on eleventh day. Kidney and intestinal changes found.

2. *Somer's Case.* Vaginal, 1:1000.

3. *Winter's Case.* Intra-uterine douche, 1:1000; vaginal afterward of 1:1000. Death on fourth day. Post-mortem, gangrenous colitis and peritoneal exudation.

4. *Vöhtz.* Intra-uterine injection, 1:750, after abortion. Death on eleventh day after intestinal and kidney symptoms.

5. *Partridge.* Two intra-uterine injections, 1:2000; dysenteric symptoms and death.

6 and 7. *Thorn.* Intra-uterine douche after missed abortion, 1:1000; vaginal douche, 1:1000 in forceps case. Renal and intestinal lesions.

8. *Ziegenspeck.* Death on thirteenth day after three injections of 1:5000. No

bad symptoms until second intra-uterine douche on eighth day; patient died five days afterward.

9. *Netzel.* Intra-uterine douche, 1 : 1500, on seventh day; abdominal pain then complained of; renal symptoms with albumen and lime and lime salts in urine. Death on twenty-second day.

10. *Gustav Braun.* Douche during first stage; episiotomy performed during second stage, and intra-uterine irrigation, 1 : 1000, after expulsion of placenta. Diarrhœa on third, and collapse on seventh day.

11. *Hofmeier.* One douche of 1 : 1000. Death on sixth day.

In all cases of douching Keller found mercury in urine, and also albumen.

Dakin then gives the results of the use of sublimate irrigation in 170 patients confined in the General Lying-in Hospital, London, under the charge of Dr. William P. Champneys. The sublimate is used as follows: Hands and instruments are disinfected with 1 : 1000, the vagina is douched after labor with 1 : 2000, two pints, at a temperature of 115°–120° F., being used. For the first two days three pints of 1 : 2000 at 110° F. are employed, and then the strength is reduced to 1 : 4000. The patient occupies the dorsal posture, and after the douche is finished turns on her hands and knees, to evacuate any residuum.

Symptoms of poisoning usually appeared between the fourth and seventh days, and were usually diarrhœa, with blood and tenesmus, sometimes vomiting, patchy tongue, thirst, and loss of appetite, fetor of breath, salivation, with tenderness of teeth and gums, as well as red line on gums. The urine contained albumen in 11 of the cases.

Details of the one fatal case are given, with examination of kidneys.

He comes to the conclusion that a strength of 1 : 4000 is sufficient for douching.

The Etiology, Pathology, and Classification of Salpingitis.

The question of the pathology of salpingitis has been a matter of controversy between Tait, of Birmingham, and Sänger, of Leipzig. We have no intention of judging between the two combatants, but merely summarize the excellent *résumé* of the classification and pathology of salpingitis given by Sänger in a letter addressed to the President of the Chicago Gynecological Society (*Amer. Journ. of Obstetrics*, March, 1887).

Sänger bases his pathology on the germ theory and the anatomical relations of the sexual organs. The genital tract from hymen to fimbriated end of Fallopian tube is exposed to access by organisms which may pass from the external medium to the tubes either along the mucous membrane or through the lymphatics; mischief may also pass from the peritoneal cavity into the tubes.

Various microörganisms have been found in the genital tract, but those considered the cause of disease (pathogenous microörganisms) are not many. Sänger classifies the forms of salpingitis into three groups, as follows:

Group I. *Forms of salpingitis produced by known specific microbes.*

1. Salpingitis gonorrhœica, produced by the gonococcus of Neisser.
2. Salpingitis tuberculosa, produced by the bacillus tuberculosis of Koch.
3. Salpingitis actinomycotica, produced by the actinomyces bovis of Ballinger.

GROUP II. *Forms of salpingitis due to specific microbes identical with those producing traumatic infection.*

1. Salpingitis septica.

GROUP III. *Forms of salpingitis produced by specific but as yet unknown microbes.*

1. Salpingitis syphilitica.

GROUP I. Gonorrhœal salpingitis is admitted by all as a form, the only point denied by some being whether the gonococcus of Neisser is the cause of it. All admit that gonorrhœa spreads to the tubes and sets up this form. Sänger shows that the tube becomes distended with pus, chiefly at the abdominal end, while the uterine end becomes thickened; the peritoneum becomes infected by the pus escaping through the ostium abdominale. Gonorrhœa produces only surface suppuration, and any abscesses in the psoas ligament or ovaries are usually septic.

It must not be forgotten that while Neisser's gonococci are found abundantly in the gonorrhœal pus from the cervix, their demonstration in the tubes is difficult, and in some cases of undoubted gonorrhœal salpingitis they have not been found.

Salpingitis tuberculosa is known chiefly through Hegar's work (*Amer. Jour. Med. Sci.* for April, 1887, p. 586), and is a distinct affection from the caseating pus of a pyosalpinx. This latter should be termed "coagulation necrosis."

Salpingitis actinomycotica is undoubtedly one of the greatest raritie in gynecology, but has been described by Zemann in his paper "Ueber die Aktinomycose des Bauchfells und der Baucheingeweide beim Menschen." In this case the tubes were dilated and purulent, with clumps of actinomyces present in the lumen of the tube and granulations in the walls. The fungus had passed from the intestines or vagina. [Descriptions of this fungus will be found in Klein's *Micro-organisms* and Woodhead's *Pathology.*]

In the forms of salpingitis known as septica and syphilitica, the evidence of their being due to a pathogenic micro-organism is not yet complete. It must be remembered that the pathogenous micro-organism of syphilis has not yet been discovered, and much has yet to be done in regard to those and septic conditions.

Cancer of the Uterus.

WILLIAMS, in his interesting Harveian lectures (*Lancet*, 1887), defines the term "cancer of the uterus" as meaning a new growth possessing malignant properties —*i. e.*, it possesses the power of invading neighboring tissues and of reproducing itself in the form of secondary growths in other and distant parts. He recognizes three types of malignant disease, viz., sarcoma, adenoma, and carcinoma. Sarcoma is of the connective tissue type. Carcinoma and adenoma are of the epithelial type. This classification is not perfect, of course, as we may have what looks like a mixed form, and sarcoma may assume an alveolar form like adenoma.

The uterus is considered as divided into three parts, viz., the vaginal portion, the cervix, and the body. The portio lies projected into the vagina; the cervix is bounded below by this and above by a plane passing through the portion where the characteristic cervical structure ends and the tubular glands of the uterus begin. This, of course, gives also the lower boundary of the body. Dr. Wil-

liams condemns rightly the use of the terms scirrhus, encephaloid, medullary, and epithelioma.

Cancer of the portio vaginalis is defined as beginning in the stratified epithelium on the vaginal surface or in the transitional epithelium at the os externum. He thus excludes sarcomata and glandular cancer. Eight cases are described in their clinical features and the microscopic examination of the parts removed given. The disease was found to begin at one or several points, not to spread into the cervical canal, but to creep toward the vaginal wall, thus advancing superficially in seven of the cases. Seven of the cases were married, but they had less than the average number of children. The earliest symptom was hemorrhage.

Before taking up cervical cancer, the nature of the so-called erosion is considered. A true erosion is defined as being a surface with a structure like that of the mucous membrane of the cervical canal lying in the position usually occupied by squamous epithelium. It differs from cancer in that its epithelium is in single layer, and from adenoma in the glands being comparatively superficial. He believes such erosions to be produced by the glandular epithelium proliferating and then destroying and replacing the squamous epithelium beneath which they lie. The stroma around the glands is also active, being infiltrated with nuclei and small cells. The view advanced differs from that of Ruge and Veit, who hold that the glands in an erosion arise from a change in the deeper layer of the stratified epithelium.

Cancer of the cervix begins in the glands, which increase in number and grow where usually they do not exist. Their epithelial lining proliferates, becomes multiple-layered, and may fill the gland lumen. It may exist in a polypoid, papillary, or nodular form; the two latter forms passing into the substance of the cervix and connective tissue around it—the very worst direction possible from an operative point of view. They avoid encroachment on the uterine body and vaginal walls.

Cancer of the body of the uterus is either adenoma or true cancer, both growing from the gland epithelium. It spreads into the muscular coat and may open into the intestine, or cause inflammatory adhesions. The glands affected are those of the broad ligament or of the connective tissue anterior to the spinal column. In all the cases the disease begins after the menopause, the ages averaging from fifty-three to sixty-three.

Dr. Williams discusses finally the question of radical treatment, and advocates supra-vaginal amputation for cervical cancer as against total extirpation. For cancer of the body, of course, total extirpation is the only remedy.

The Rheumatic Element in Chorea of Early Childhood.

Dr. Octavius Sturges, of London, says: Chorea and rheumatic arthritis, whether in union or apart, are first discernible at a period of life which though past infancy is yet near enough to that age to retain some of its characteristics, Now, in infancy morbid phenomena are the most generalized, and concern mainly the nervous system, the excitability of whose reflex centres is excessive. At this age impressions of the most various kinds, whether central or peripheral, have a common issue in convulsion—convulsion which if not general is so vari-

ously and capriciously bestowed that the part selected for spasm gives but little guide to the source of it. Even when infancy has passed, and convulsion begins to limit its area, there is still a remarkable indifference and changefulness in its modes of display. Thus, with a young child spasm of the larynx will very readily pass to the diaphragm, so that there shall be stridor or laryngismus one day or one hour, and dyspnœa the next. And speaking generally, many central lesions—cerebral hemorrhage, tumor, embolism—which in after life give definite notice of their seat by means of the particular muscles they affect, are in early childhood so confused together that any attempt at localization would be futile. The nervous function is as yet imperfectly differentiated; it is unable to appreciate various sources and modes of irritation, or to separate them one from the other. And so long as this process of differentiation remains incomplete we should expect (as we find) that those morbid phenomena which, as there is independent reason for believing, have a real kindred—depending, so to say, upon the stimulation of neighboring centres—should for the while be merged and confused together. But growth and use have a constant tendency to draw them apart. Differentiation becomes more accurate, while at the same time external and accidental circumstances impart their own bias in this direction or in that.

Let me make my meaning plain by an illustration. Take any of the examples that have been already quoted of young children exhibiting side by side chorea and rheumatic arthritis. In these we have a group of symptoms, motor, cardiac, articular, signals in common of some nervous disturbance. Here, no doubt, are the elements out of which in later life we construct two diseases. But at present there are not two, but one. And by their appearance at this exceptionally early period of life they prove a special liability on the part of their subject both to chorea and to rheumatic arthritis. Now, there are in the world choreic inducements, and rheumatic inducements, and there are epochs of life which are favorable now to the development of the one disease, now to the other. And so in life's progress it will depend very much upon accident whether the child supposed shall develop chorea or rheumatism. She is ready for both, yet with a varying preference which is determined mainly by age. But this comparative indifference is of short duration. Let a child be encountered with consequent rheumatism, or a sudden alarm with consequent chorea, and either of these disorders will impress its own likeness and impart a proneness to repetition. But it is not the cause alone that has to be considered, there is the season of life as well. Chorea, for reasons that need not now be discussed, is a child's liability, favoring the female sex. Rheumatism is a young adult liability, with no marked sex preference except (as has been shown) in early childhood. We see, therefore, in that later period of childhood, when the two diseases have, so to speak, joint reign, the one or the other occurring by preference according as accident has determined the character of the early attacks, while still the liability to suffer in either way is not yet at one end. Up to a certain age fright or nervous excitement may cause chorea in a rheumatic subject, or exposure rheumatism in a choreic subject. But soon this double liability ceases. That time of life comes when the reign of chorea is feeble and nearing its end, while rheumatism takes wider expansion, and becomes endowed with many prominent characteristics which have been hitherto absent.

But it is needless to pursue the subject further. My main design, indeed, is

not to discuss theories, but to call attention to facts which have only now become known to me. Looking at chorea as a whole, I have always sided with those who maintain that its relationship to rheumatism is often exaggerated, and that the manner of the association in certain instances is far more striking than its frequency upon the whole. That is my contention still; but, as I now perceive, it is incomplete. A full examination of the question, from the point of view selected in the present paper, compels the further conclusion that chorea and polyarthritis in their pathogenesis are nearly akin, while at the same time, as I venture to think, it suggests the reason why these two affections, although cradling together, should have but a short-lived intimacy, as well as the nature of the agency which soon begins to relax the bond of union and at length altogether dissolves it.—*Archives of Pediatrics*, May, 1887.

On Sources of Error in the Diagnosis of Diseases Accompanied by Fever.

Dr. FILATOW, in *Archiv für Kinderheilkunde*, Bd. VIII., Heft 3, says: We will now discuss some errors likely to be made in confusing symptoms, or laying too much stress on some and neglecting others. One of the most important of these is in mistaking a local for general disease, in consequence of the local lesion being latent for the first few days. In any case where there is fever we must not conclude at once that the attack is some specific fever because no local disease is discoverable, as later it may give definite signs of its presence. The latent course of some forms of pneumonia and acute meningitis are of especial interest in connection with this. It sometimes happens that the acute meningitis of small children during the first week is characterized only by vomiting and restlessness, which may easily be looked upon as due to dyspepsia, colic, or gastric catarrh. If feverishness is present with irregular rises, occurring sometimes in the morning, sometimes in the evening, frequently sinking below normal, and if vomiting is present, in the absence of any local cause, acute meningitis may be suspected. The obstinancy and persistency of the vomiting is in favor of meningitis; the vomiting of dyspepsia, in the majority of cases, is relieved by regulating the diet, while cerebral vomiting goes on in spite of the greatest care being exercised to supply suitable food. Later, a full fontanelle, dazed look, stiffness of the neck, and convulsions, render the diagnosis less difficult.

The differential diagnosis of typhoid fever and tubercular meningitis, in typical cases of the latter, offers no difficulty, as in meningitis there is vomiting and but little fever. The headache is, moreover, never absent, and by the end of the first week, in any case, the diagnosis is certain. In some cases of typhoid, however, in the first days there is apathy, drowsiness, irregular pulse, soft abdomen, and constipation. These symptoms naturally suggest meningitis, but the presence of rose-spots and enlargement of the spleen would declare the nature of the disease by the end of the first week. Much more difficulty is experienced in the diagnosis of those cases where a meningitis supervenes in the course of an acute miliary tuberculosis, or, as occasionally happens, a simple meningitis occurs in the course of typhoid fever; in both varieties the cerebral symptoms may supervene during the second week; the presence of rose-spots and swelling of the spleen would decide the diagnosis in favor of the latter.

In pneumonias which run a latent course, the lesion is mostly at the apex. In the absence of physical signs, other characteristic symptoms are usually present: (1) Dyspnœa, with action of the dilator nasi, and accentuated expiration; (2) short painful cough; (3) high fever, 104° to 105° F.; (4) frequent stitch in the side, sometimes in the abdomen.

A second source of error in diagnosis is the value which is apt to be attached to symptoms which in reality are simply the result of a high temperature; the question being often difficult to decide as to whether convulsions, headache, vomiting, etc., are caused by some cerebral lesion which also gives rise to fever, or whether the fever is the result of some zymotic disease and the symptoms owe their origin to the fever present. One of the most important of these symptoms of difficult interpretation is eclampsia or convulsions. Convulsions accompanied by fever are either symptomatic of meningitis, or are the result of fever or the poison of some infectious disease. Convulsions are commonest in children under three years of age, and may be symptomatic of a commencing pneumonia, infectious disease, or acute diarrhœa. The convulsions which precede a pneumonia are generally accompanied by hurried respiration, and a temperature of 104° or 105°. Such a temperature at the beginning of meningitis would be very exceptional. Convulsions at the onset of scarlet fever rarely give rise to any difficulty of diagnosis, inasmuch as the rash and sore throat make their appearance early in the attack. The diagnosis is much more uncertain during the early stages in smallpox, where convulsions are apt to accompany the early stage. The presence of an epidemic, petechiæ on the body, swelling of the spleen, absence of vaccination marks, will aid in the diagnosis. Convulsions are rarely the first symptom in meningitis, or only in very acute cases; usually supervening on the second or third day, and preceded by vomiting.

A third source of error in the diagnosis of febrile disease consists in mistaking the ephemeral or abortive feverish attacks to which children are subject for more serious forms of disease. These attacks are frequently sudden, marked by a rapid rise in temperature to perhaps 104°, and then in the course of a few hours, twelve or more, a relapse takes place, the temperature sinking to normal; this may be followed by a second rise. These attacks are apparently sometimes due to cold, and are marked by an outbreak of herpes about the lips and nose.

A fourth source of error arises through the anomalous course of several zymotic diseases, as measles, typhoid, etc., so that they may be mistaken for non-infectious disease. The best example of this is the difficulty which sometimes arises in distinguishing between typhoid and miliary tuberculosis.— *Medical Chronicle, June, 1887.*

The Treatment of Endo- and Pericarditis.

Dr. JOHN M. KEATING and Dr. WILLIAM A. EDWARDS: As primary endocarditis is of extreme rarity, the treatment of endocardial inflammation is mainly that of the disease with which it is intercurrent. As we have already noted, it is prone to occur as an accompaniment of rheumatism, scarlatina, nephritis, measles, variola, varioloid, erysipelas, diphtheria, and typhoid fever; it has arisen during the course of coxalgia, or in those subject to the diathesis; its association with chorea and erythema nodosum has also already been noted.

In the first-mentioned affection endocarditis may appear early in the case and be the sole manifestation of the rheumatic disease; or, on the other hand, it may be the first local manifestation of a general rheumatic outbreak that in a few days will involve the joints. Cases of endocarditis should be placed at perfect rest; all excitement of any kind whatever is contra-indicated. There should be but little bright light admitted to the child's room, nor should conversation be indulged in about the little patient's bedside. Cool acidulated drinks will be gratifying to the patient and will assist in reducing temperature, as lemonade sweetened with glycerin, or neutral mixture. Locally, the præcordia may be irritated by iodine in the following combination:

℞. Tr. iodin, ... ℥iii.
Spts. chloroformi, ... ℥i.
Tr. aconit. rad., ... gtt. xxv.
M. Apply with a brush twice daily.

This mixture will not cause pain by its application, and will not be so likely to strip off the epidermis early in the case. The application of tr. iodine alone to the delicate skin of a child will cause undue irritation and make the child very restless, thus exciting cardiac action.

In older children a blister may be applied as large as the præcordial surface. To this raw surface Bouillard has applied daily forty to sixty centigrammes of powdered leaves of digitalis, the irritant action of which maintained the vesicant action. We would, however, sound a word of caution in this method of administering digitalis, as we have noted alarming symptoms from the absorption of digitalis by the skin.

In the rheumatic cases much benefit may be derived from salicylic acid, given as the salicylate of soda, lithia, or quinine. Some authorities administer large doses of nitrate of potash or tartrate of soda and the sulphate of quinine.

The salicylates may be pushed if they appear to act favorably upon the rheumatism and if the cardiac action is not extremely irregular, agitated, or intermittent, and if the pulse is regular and not too frequent.

Digitalis may be exhibited as the tincture in six to eight drop doses three times a day for a child of five years, the dose being gradually and cautiously increased as needed, or decreased if necessary, as when its effect has once been secured we can maintain the impression with much smaller doses. It must be borne in mind that digitalis is not one of the quickly-acting cardiac stimulants, an opinion that our intimate association with students and young practitioners has taught us is very prevalent. In many cases we much prefer the infusion of digitalis flavored with cardamom, in drachm doses.

We have never derived any appreciable benefit from convallaria in any way whatever, and, indeed, it seems to us that the drug merits no place in our consideration.

Veratrum and aconite are to be administered only with the extremest care, and are then to be carefully and intelligently watched. Opium, if given at all, must be in small doses, and is also to be watched most carefully, especially should there be any tendency to cyanosis. Bromide of potassium has been of service in our hands in quieting the patient and allowing the heart an opportunity of estab-

lishing its equilibrium. If the cardiac muscle is weakened, possibly the sodium salt would be the better drug. We consider that under no circumstances would it be justifiable to administer chloral.

Upon the whole, the most benefit will probably be derived by an early supersaturation of the blood by the alkalies. The ordinary fever mixture of spts. ætheris nit. and liq. ammoniæ acetatis is alkaline and sedative.

During convalescence great care is to be exercised, as in all probability permanent injury to the valves has been the result of the acute process. A well-selected dietary is to be advised—one that will be nutritious, but will not demand undue exertion of the gastro-intestinal tract or the large abdominal glands in its assimilation, and above all else will not cause flatulent distention of the stomach and reflexly irritate the heart. This subject has been fully elaborated by one of us in a recent publication.*

The importance of guarding against the evil effects of high temperature merits our serious consideration. The diseases during the course of which endo- and pericardial inflammations are usually associated are apt to have exceedingly high temperatures, such as rheumatism, pleuro-pneumonia, pyæmia, etc., and the question often arises what effect the treatment such as is in vogue will have upon the cardiac condition. The treatment is usually cool bath, cold sponging, with pack, or evaporation by surrounding the child with a moistened sheet. In judging of this the strength of the heart and the freedom of the circulation have to be taken into consideration, and the activity and character of the treatment arranged accordingly. For instance, in a case of pleuro-pneumonia, if the heart be implicated and weakened, a cold douche or sudden shock should be most certainly avoided. In cases of recurrent rheumatic endocarditis engrafted upon some old valvular lesion, the sudden shock might fatally affect a weakened heart, and cardiac paralysis from over-distention or visceral congestion be the result. In no case should a persistent temperature of over 104° be permitted; it is not the question of the necessity of the reduction to which we call attention, but to the method by which it must be accomplished.

We do not, however, at all advocate the indiscriminate knocking down of temperature simply because the condition of hyperpyrexia is present, a custom that to-day appears to be too much in vogue. First, we should endeavor to determine the cause and effect of the high temperature. It would be no more rational to exhibit antipyretics or a cold pack to reduce a high temperature without first ascertaining its cause and endeavoring to remove it than it would be to treat any disease by a name; for example, the administration of digitalis in "heart-disease" without first determining the lesion and the condition of the cardiac cavities.

It is well, then, to first use the milder means before we resort to the more heroic measures, now so much the fashion.

The simple fever mixture, already referred to, in combination with drop-doses of aconite, say every four hours for a child aged five, together with iced lemon-juice and the carbonated waters, will frequently accomplish our object. We may sponge the extremities with cool water containing an evaporating volatile sub-

* "Maternity, Infancy, and Childhood." J. B. Lippincott Company.

stance, as vinegar or alcohol; should the thermometer again show a registration of 104°, or above, the cautious application of ice-cloths to the head and the nape of the neck would be justifiable, or even an ice-cap in children above twelve years of age. Quinine in suppository may be administered as the temperature begins to fall. If, however, the temperature should persistently remain high and show its well-known effects upon the heart and circulation, then we may exhibit either antifebrin, antipyrin, or thallin.

The former is probably the most reliable, its action usually being well-marked within an hour after administration. The dose for a child of five years may be from three to six grains, repeated several times during the twenty-four hours, if necessary. As the temperature falls the pulse will be reduced in frequency. In some cases slight cyanosis may supervene. Sweating is almost always present, and in some cases may be exhausting or even alarming. Atropine has but little if any effect in controlling this ephidrosis. An increased amount of urine will usually be voided following the administration of the drug. Antifebrin may occasionally cause vomiting, although it is not so likely to as either thallin or antipyrin. Rarely will the patient complain of chilliness, which we sometimes note after the administration of the two latter drugs.

Iron and arsenic can with great propriety be administered during this convalescent stage.

Intussusception in Infants.

Dr. D. A. K. Steele, of Chicago: Intussusception or invagination of the upper into the lower portion of the intestine is one of the most frequent causes of acute obstruction of the bowel, constituting, according to Brinton, not less than forty-three per cent. of the fatal cases, and from the more elaborate table of Leichtenstern we find more than thirty-eight per cent. due to this cause.

Males are more frequently affected than females. In regard to age, West publishes a table of seventy-one cases under fifteen years, of which forty cases occurred during the first year and thirty-one in the fourteen succeeding years.

According to Mr. Treves, one of the best authorities on intestinal obstruction, one-half of all cases occur during the first ten years of life and one-fourth during the first twelve months. From a scrutiny of these tables it would appear that from the fourth to the eighth month seems to be the time when there is the greatest danger of invagination taking place in an infant.

An intussusception embraces three layers of the bowel, each embracing all the coats of the intestine. The external layer is called the sheath or intussuscipiens, while the internal or entering layer and the middle or returning layer together are called the intussusceptum. The neck is the junction of the external and middle layers, and the apex the junction of the middle and internal layers. These are sometimes doubled when we have five layers, and more rarely tripled when we have seven layers.

Intussusception may occur: first, at the ileo-cæcal valve; second, in the ileum or jejunum; third, in the colon.

One-half of the cases occur at the ileo-cæcal valve, one-third in the small intestine, and one-sixth in the large bowel.

Intussusceptions soon become irreducible from adhesions forming between the

peritoneal surfaces of the entering and returning layers, which are usually most firm at the neck, and reducibility is soon still further interfered with by swelling, œdema, or bending and twisting of the intussusceptum. The sheath suffers but little change, as a rule, although perforation due to pressure-ulceration may take place. The intussusceptum, however, very soon becomes strangulated and gangrenous, hence the necessity for prompt recognition and relief.

Among predisposing causes are feeble health, diarrhœa, the presence of irritating or undigested food, worms, intestinal polypi, adhesions following injury, etc.

The diagnosis of intussusception in an infant is usually an easy matter. A baby previously in good health is taken with sudden, violent vomiting, with loud cries and evidence of abdominal pain and uneasiness occurring at frequent irregular intervals, and accompanied with severe straining and the passage at first of fæcal matter, and then of mucus tinged with blood, and later of blood alone, in considerable quantities. Thirst, anxious expression, and collapse, are marked symptoms, and a distinct, sausage-shaped tumor can frequently be felt at the site of the obstruction in the abdomen.

The continuance of the intussusception leads to exhaustion, a rapid, weak pulse, sunken, pallid face, dull eye, semi-comatose condition, from which it is only aroused by attacks of vomiting and straining, with bloody stools, until death usually closes the scene in from two to five days in cases that are left to nature, some holding out for seven days. Convulsions are occasionally met with, and spontaneous disentanglement of the invaginated portion rarely occurs.

In the differential diagnosis of these cases, we must bear in mind volvulus, hernia, congenital stricture, interstitial polypus, strangulation by bands of lymph, foreign bodies in the bowel, acute enteritis, proctitis or peritonitis, as having symptoms somewhat in common; but with a careful examination by exclusion we can easily reach a correct diagnosis, and if there is any doubt the child should be anæsthetized, and the abdomen thoroughly and systematically palpated for a tumor, or examined per rectum for a hardened mass.

Treatment may, for convenience of description, be divided into three plans: 1, medicinal; 2, mechanical; 3, operative.

The medicinal plan of treatment is essentially palliative or expectant, and rarely or never curative. It is a non-interference with the essential factor of the disease, and a pleasant kind of delusion that practices euthanasia on these little victims by hot poultices, opium, and rest.

The second plan of treatment embraces the relief of the intussusception by mechanical means—rectal injections of warm water, insufflation of carbonic acid gas or air to unfold the invagination, manual manipulation of the abdomen under anæsthesia, traction upon either end of the sausage-shaped tumor, if one is found; and inversion of the child during the injection, with violent shaking, has been advised, although I doubt whethe the inversion aids the enema much, if any. The administration of shot or mercury is a nearly obsolete procedure.

In regard to the details of the mechanical plan of treatment: Having once clearly established a diagnosis of acute obstruction of the bowel in an infant, due to intussusception, I proceed as follows: Having previously given an opiate to quiet all peristalsis, I anæsthetize the child with chloroform, on account of its

safety and celerity with children, then carry a rectal tube or large catheter about six inches within the anus (the child lying on its back across the knees of its nurse or an assistant). Attached to this tube or catheter I have a flexible rubber tube, some two or three feet long, leading to and attached to a small glass funnel. Into this funnel I pour alternately solutions of soda bicarbonate and tartaric acid, as recommended by Ziemssen and successfully employed by Leibur and Jate, thus generating carbonic acid gas, and rapidly and safely inflating the large intestine. Three drachms of each will generate enough gas to completely distend the colon of a child. If this pressure is not sufficient to relieve the obstruction, I then attach an ordinary double bulb-syringe, and inflate with air as much as I think the bowel will stand, while the abdomen is being carefully manipulated by an assistant. If this does not relieve the intussusception, I then resort to warm water enemas, using as much pressure as the bowel will bear without danger of rupture.

Mr. J. Grey Smith lays down the following rules to guide us in performing laparotomy for acute obstruction of the bowels:

1. Make the incision in the middle line below the umbilicus.

2. Fix upon the most dilated or the most congested portion of the bowel that lies near the surface, and follow it with the finger as a guide to the seat of obstruction.

3. If this fails, draw the intestines out of the wound, carefully covering it until increase of distension or congestion, or both, in one of the coils, gives an indication that the stricture lies near.

4. If there be considerable distention of the intestines, evacuate their contents by incision and suture the wound. Never consider an operation for intestinal obstruction within the abdomen complete until the bowels are relieved of overdistention.

5. Be expeditious, for such cases suffer severely from shock. The whole operation ought to be concluded in half an hour.

After opening the abdomen, Mr. Hulke suggests that we find the obstruction by tracing the collapsed and empty bowel from below upwards to the point of invagination. In some cases this would probably be preferable, but with the greater frequency of intussusception at the ileo-cæcal valve, a practical physician would be apt to go directly to that point first with his finger unless a distinct tumor presented elsewhere, otherwise Smith's or Hulke's plan of search would be adopted.

The closure of the abdominal wound, after the parts have been irrigated with a hot solution of boracic acid and slightly dusted with iodoform, is accomplished in the usual manner by interrupted aseptic sutures and a heavy Lister dressing. The after-treatment consists in opium, starvation, and absolute rest for a few days.

Interference with Locomotion as a Uterine Symptom.

Graily Hewitt, M.D., F.R.C.P., of London, says: Considering the very large number of cases in which "inability to walk easily," "pain on walking," or various modifications of the symptom occur, it is remarkable that so few practitioners comparatively speaking pay any attention to it, or even treat the symtom seriously. There can be no doubt, however, that patients themselves look

upon this symptom as a serious one, and indeed in most cases speak of it, when they are allowed to express their unbiased opinion on the subject, as an inconvenience which most seriously affects their comfort in life, and for relief of which they would be willing to make great sacrifices.

The above is a general statement. Any amount of evidence is obtainable in regard to its accuracy by interrogating patients, which should be done, not by leading questions, but by requesting them to state what are the principal inconveniences of which they complain. This method of inquiry will reveal the fact, that patients attach more importance to this inability for locomotion as interfering with their comfort than almost any other. For this reason, if for no other, this symptom is deserving of particular attention, and its explanation is a matter of great interest.

There is no difference of opinion as to the necessity for rest and the horizontal position in cases where there is found to be present marked tenderness or signs of inflammatory action in the uterus or its immediate neighborhood, the presence of such inflammatory action being revealed more or less decidedly by the results of a digital examination. It is not necessary to point out in such cases as these that difficulty or pain in locomotion are connected with, and due to, the inflammatory condition of the uterus or structures adjacent. In such cases no one considers it surprising that the patients should prefer to keep quiet, and the medical attendant usually and very properly advises that the horizontal position should be maintained.

There is another class of cases in which the pain on movement is found to be connected with laceration of the cervix and os uteri during some previous labor. These cases present themselves oftener than is generally supposed; the torn surface is continually irritated and stretched when the patient is walking or standing, eversion of the lining of the cervix occurs, and a chronic source of irritation is set up. It is not infrequent in such cases to find also, from time to time, small localized cellulitic exudations and more or less tenderness to the touch.

The cases I have however more particularly in view, are those in which no particular sign or presence of inflammatory lesion of the body of the uterus or of the cervix and os uteri is detected on vaginal examination, no tenderness to touch, and an absence indeed of what may be termed spontaneous pain. The characteristic is, that so long as the patient remains quiet, there may be little discomfort; but the upright position, or the act of walking, induces pain or an uncomfortable sensation which is so decided, that in the end the patient avoids walking as much as possible. Thus originates in not a few cases a chronic invalidism, the starting point of which will, on inquiry, generally be found to have been habitual pain on attempting ordinary exertion.

Patients suffering in the manner now described, and not presenting obvious signs of presence of inflammatory action in the pelvis, are often looked on as fanciful, or hysterical, or disposed to exaggerate their sufferings. No doubt there are differences in regard to the manner in which different individuals bear pain, but the pain nevertheless has to be accounted for, and in the most typical cases it must be remarked, the patient is obviously and strongly desirous of living an active life, and anxiously seeks means to enable her to do so.

There are, it should be here remarked, cases in which general debility, asso-

ciated with disorder of the heart or lungs, or general nutrition, giving rise to a certain incapacity for locomotion; but in such cases what the patient complains of is prostration after walking, whereas in the cases to which I desire to call attention, the walking power is often really good, but the exercise of that power gives rise to such discomfort internally that it cannot be kept up for long together.

Associated with the presence of pain in one or other groin, or in the back, there is frequently experienced a bearing-down sensation. The most common seat of this pain is in the groin or the pelvis on one side or other behind this spot. Now the question is, what interpretation is to be placed on the pain arising from locomotion, when not obviously connected with some inflammatory condition? The answer is that the movement in question is painful because it imparts an unusual amount of movement, or an unusual kind of movement, to the uterus or to certain parts of the uterus. The uterus enjoys naturally a power of motion backwards, forwards, laterally, and upwards or downwards, within certain restricted limits. It enjoys flexibility also within certain limits. Unusual flexibility is not seldom associsted with excess in degree of the other movements, as well as with peculiar tendency to lateral movements.

These excessive movements are, or may be, painful and productive of pain. They are liable to be produced by standing or by locomotion. Frequently they are brought about in the first instance by excessive locomotion. Frequently they are brought about in the first instance by excessive locomotion or analogous causes (straining, over-exertion, etc.), and subsequently the evil state of things thus produced is intensified and temporarily aggravated by even trifling exertion.

The proof that the foregoing is the true explanation is easily obtainable by watching a few cases, and observing the effects produced on the position and shape of the uterus by exertion. Not less useful in obtaining valuable evidence is the analysis of the patient's symptoms, as described by herself, whereby it is made often quite clear how and why it is that the discomfort complained of arises.

In most cases where this kind of pain is experienced, the uterus falls lower than usual in the pelvis, but more generally we find that the body of the uterus is the part which particularly is to be felt lower than usual. In fact, according to my experience, simple descent of the uterus, unattended by marked version or flexion, gives rise to little inconvenience within certain limits. As regards retroflexion, most authorities are content to regard this as a real pathological condition. As regards anteflexion, however, which I believe is responsible for the pain now under discussion in the large majority of cases, there is less unanimity. In fact, many deny that anteversion and antefixion are pathological at all. True, slight anteflexion and slight anteversion may be admitted as a definition of the shape and position of the normal uterus, but there are varous degrees of this ante-displacement and flexion met with, which as the result of my experience are liable to be attended with grave symptoms. The pain described above as produced by locomotion, is one of the grave symptoms produced by severe anteversion or anteflexion of the uterus. The reason that this has not yet been generally admitted is, I believe, that sufficient pains have not been taken to differentiate slight normal anteversion and anteflexion with a properly mobile uterus

from severe degrees of this kind of displacement and change of shape. The normal anteflexed uterus, oscillates within slight range, recovering its position and shape after moderate disturbance. The abnormally flexible uterus gives way to a greater extent, and the extra amount of flexion, as well as descent involved, gives rise to pain. In cases where the uterus has gradually fallen lower and lower it is apt to become fixed, and does not recover its true position after exertion. This constitutes a condition in which fresh exertions occasion pain owing to the increased pressure downwards, and under these circumstances, the slightest exertion gives rise to discomfort.

"Uterine dyskinesia" is the term which I have employed in describing the symptoms specially defined in the foregoing remarks. It is as common as leucorrhœa, and more common than most other uterine symptoms, and has a very definite and well-marked place in uterine symptomatology.

One of the most important arguments adduced in reference to "uterine dyskinesia," its nature and explanation, is that whatever tends to preserve the uterus in a state of repose is almost invariably successful in giving the patient relief. In acute cases of flexion, even of the worst kind, great benefit is derived from placing the patient in such a position that the force of gravity no longers acts unfavorably upon the uterus. Thus, in cases of anteflexion the recumbent dorsal position with hips raised is the one to be selected, whereas in cases of retroflexion the very opposite is necessary. Still more marked results follow when steps are taken by internal mechanical treatment, to raise the fundus, whereby the flexion is lessened in a more decided manner. Now, the fact that these beneficial results do follow, and the patients obtain—it may be said almost invariably—relief by these positional or mechanical methods of treatment, constitutes an argument of no little value in favor of the view of the subject which has been above maintained.

In the foregoing observations I have made no attempt to show why it is that excessive movements and change of shape of the uterus therewith associated, give rise to pain during locomotion. I have simply insisted on the fact that difficulty in locomotion in women is so very generally met with in cases where these excessive movements and changes of shape of the uterus exist, that there can be no doubt that there is an intimate relation between them, the latter as cause, the former as the effect.

V. SURGERY.

A Case of Laparotomy in Invagination of the Colon Descendens.

THEODORE KOCHER, in *Berliner klin. Wochenschr.*, relates the following case of a 5¾ year old boy. The operation took place eight days after the first symptoms of the disease. The reduction of the invagination presented the greatest difficulty, and was only accomplished after forcibly destroying adhesions. The lower end of the invaginated intestine was of a blackish red-brown color, and drawn into pronounced folds. On the ridge of these folds perforations were found in three places. Death in six hours from collapse; no post-mortem.

Septic Bacteria of the Bladder.

Dr. CLADO has made a series of researches in order to determine and describe the different microbes developed in the bladders of those suffering from affections of the urinary passages, and particularly from cystitis. By a series of cultures of pathological urines he isolated about a dozen varieties of microbes, some of which were hitherto unknown. Among those developing in the urine of cystitis there was one that when inoculated into the cellular tissue or peritoneum of the mouse caused speedy death. This is denominated by the specific name of "Septic Bacteria of the Bladder." A more complete treatise upon the subject is in preparation.—*Annales Médico-Chirurgicales, May, 1887.*

Removal of 1 M. 60 Ctm. of Gangrenous Intestine with Intestinal Sutures.

THEOD. KOCHER, in *Schweizerisches Correspondensbl.* relates a case of strangulated hernia of 24 hours standing. Patient, a farm laborer, 57 years of age. The principal suture was made in healthy parts throughout. The sack and the atrophied testicle were removed and the wound sewed up, leaving, however, a place for the drainage of the abdomen. Healing took place without reaction from removal of drainage-tube, on the second day. The author emphasizes the opinion that all depends on uniting perfectly sound parts of the intestinal canal only, and that the removal of more or less of the peritoneum is comparatively a matter of indifference. The incision in the mesentery is oblique; each bleeding vessel is caught, but a direct occlusion of the mesenteric wound is not to be attempted, so as not to impair the circulation in the adjoining intestine.

How to Abort a Felon.

Dr. JOHN T. METCALF writes to the *Boston Med. and Surg. Jour.*: "My father was a medical man, who graduated from the University of Pennsylvania in 1816 or 1817. In 1839 I learned from him that a felon could, if seen early enough, be made to abort by wrapping the finger-end with narrow strips of adhesive

plaster. When pus had been formed, I learned twenty years ago, from a country doctor, that immediate relief and speedy cure would follow the gentle, slow separation of the nail from its envelope by means of a penknife blade, not too sharp, at the point nearest the seat of greatest pain. Very soon a drop of pus shows itself and relief comes. I am aware that the plan described is known to many medical men. It was not known to me at the time referred to, when the country doctor showed me how to treat a paronychious patient, whose finger I was about to lay open by the 'free incision down to the bone,' taught in the lessons of my great masters."—*Epitome.*

Two Cases of Intestinal Tumors with Invagination, Together with Remarks on the Operative Treatment in Internal Incarceration.—Wilh. Fleiner, *in Virchow's Arch.*, CL., *S. 524.*

For both cases of laparotomy in invagination from intestinal tumors, as well as for the successful production of an intestinal fistula in invagination with beginning of diffuse peritonitis, noticed by Czerny in his concluding remarks, we refer to the original. We here give only Czerny's final conclusions, which are to the effect that he would reserve laparotomy and the locating of the obstruction only for those cases of intestinal incarceration in which the strength of the patient permits it, and the abdomen is still soft and not distended, and where the location of the obstruction may be ascertained with some degree of certainty by palpation under narcotics. It is then self-evident that the incision should be made at this spot. In all other cases ileostomy must suffice. This may, as in the cases noticed by Czerny, be successful even under the most desperate circumstances, and may be executed with little assistance far from a clinical institute.—*Centralblatt für die Medicinischen Wissenschaften, No. 16, April 16, 1887.*

Cure of a Spina Bifida by a New Method, After Rupture of the Sac.

The tumor occupied the lumbar region and projected about three-fourths of an inch above the general surface. No nerve-fibres could be detected in the sac. Despite the greatest care, rupture took place on the third day after birth. When the child was quiet the fluid merely oozed forth, but during crying or any straining efforts it welled up from the wound.

After this had gone on for a week without any sign of cessation, a piece of sponge prepared in the following manner was inserted between the lips of the wound well into the cavity:

It was soaked in dilute hydrochloric acid, and a thin shaving of it, about the thickness of a half-dollar, was taken and its edges trimmed so as exactly to fit the wound. After being soaked in one-fortieth solution of carbolic acid it was introduced in the manner described. It was covered first with a piece of protective silk and then with adhesive plaster.

In three days granulations were seen extending into the sponge from each side, and a mere trace of fluid was escaping. In a week the sponge was covered by granulations, and in a few days more the wound was completely healed.

The case was seen again when eight or nine months of age, in good health.—Davidson, *in Glasgow Med. Journal*, February, 1887.

Skin Grafts Taken from a Frog.

MM. DUBOUSQUET, LABORDERIE and BARATOUX have succeeded in replacing loss of cutaneous or mucous tissue by pieces of the skin of frogs. Without glands and very vascular, it would seem very appropriate, speaking *a priori*, for this purpose. For cutaneous grafts the spot must be in a good condition of granulation. The granulations must not be broken, because the coagulated blood would prevent the immediate contact of the fragment of skin with the granulating surface. The patient must preserve immobility of the part for a few days, and the wound should not suppurate. The dressing should be rigorously antiseptic; it should be made with great care, gently compressing the parts to facilitate the adhesion of the grafts. For the application of grafts upon the nasal mucous membrane or upon aural surfaces, M. Baratoux makes use of a glass pipette by which he blows lightly upon the side of the graft where he does not wish it to adhere, after which it is moved to the place of insertion; a breath of air is sufficient to make it adhere. One may also accomplish this result by a small camel's hair brush, but the curling up of the graft must be carefully avoided. Especially in repairing the perforations of the tympanum the adhesion has been very rapid.—*Le Concours Médical, April 23, 1887.*

New Treatment for In-growing Nail.

According to the researches of ARLOING, the nail is secreted by a certain limited part that does not include all the portion adherent to the finger or toe. This part is represented by the lunula and the sulcus behind the same. The formation of the new nail is prevented by dissecting out these parts sufficiently far back. Dr. Quenu, relying on this fact, has introduced a new method for the radical cure of in-growing nail. He makes a transverse incision in front of the anterior border of the lunula: from the extremities of this transverse line he makes two longitudinal incisions two centimetres (¾ of an inch) long. He thus obtains a short cutaneous flap which is raised up, and with scissors he dissects the portion of the nail and the recto-lunar sulcus corresponding to the in-growing part. The cutaneous flap is then brought forward and sutured, a dry dressing is applied, and recovery is usually speedy, in from 6–8 days at the longest. As a consequence the nail grows narrower than before, and the painful effects of the ingrowth are no more experienced. M. Quenu has been able to observe for a long time six cases operated upon in this way without any recurrence of the trouble. M. Richelot advises a dressing of powdered bismuth, which has given him excellent results in such cases.—*Le Concours Médical, April 23, 1887.*

Autoplastic Skin-Grafting by Approximation.

M. PONCET, of Lyons, has been able, by using strict antiseptic processes, to obtain the union of a large piece of skin to cover the results of an ulcer, the effect of a burn, in the region below and behind the right malleolus. This ulcer was first scraped and excised, leaving a raw surface of eight or nine centimetres (3 to 3½ inches). The leg was then flexed and placed in contact with the right thigh, upon which was cut a flap of skin deprived of its fatty tissue and provided with a large pedicle fifteen centimetres in diameter (six inches). The flap was sewed to the edges of the ulcer, and the leg fixed in position. Upon

the eighth day the pedicle was cut, in part, and the eleventh day was disconnected entirely. Fourteen days after the operation the flap was firmly fixed, and was sensitive to the Weber compress, the patient perceiving the points distinctly when they were seven centimetres (2¾ inches) apart. We may recall in this connection that at the recent Congress at Geneva Dr. Ceci showed a patient upon whom he had successfully transplanted a large skin-graft to replace a loss of tissue produced by the excision of a cancerous tumor. He succeeded in transplanting a graft more than four inches in diameter.—*Le Concours Médical, April 23, 1887.*

The Use of Cocaine in the Operation for Hydrocele.

Dr. Alfred Petit, of Clamecy, reports the following case: M. V., 21 years of age, was operated upon the 5th of May. The hydrocele was of the size of one's fist. Puncture was made with a trocar, 1 mm. ($\frac{1}{25}$ inch) in diameter, and a lemon-colored liquid withdrawn. This was followed by the injection into the tunica vaginalis of the following solution:

Cocain. hydrochlor	gr. ½.
Aquae destill	ʒv.

By gentle pressure this liquid was brought in contact with the surface of the cavity. Ten minutes later the following solution was injected:

Tinct. iodi	ʒxj.
Potass. iodid	ʒss.
Aquae destil	ʒiii. ℈v.

After remaining three minutes in the cavity, two-thirds of this solution were withdrawn, the other third being allowed to remain. The iodine injection did not produce the least pain. In about 20 minutes there were a few shooting pains in the cord. This ceased upon the injection of a little morphine, and the patient went to sleep in five minutes. It was thus demonstrated that the preliminary injection of cocaine prevented all suffering from the injection of the iodine.—*Le Concours Médical, May 21, 1887.*

The Remedial Value of Bloodletting.

It has often seemed a matter of regret that a remedy of such unquestionable power as bloodletting should, from former abuse, be reckoned by many as among the things of the past, and that it should have run the risk of being denied all virtue, because of some inherent faults, which, however, are quite capable of compensation. Its very power, and the exact results which in fitting cases attend its employment, doubtless led to its indiscriminate use, and, inasmuch as it is spoliative in its nature—a power fraught, it may be, with the greatest evil—it is not difficult to see how readily it might be abused.

Dr. J. A. Macdougall, of Carlisle, in the July number of *The American Journal of the Medical Sciences*, makes an able plea for its more frequent use, and cites clinical evidence of its value. He points out that with that greater skill which is undoubtedly ours, with that more intimate acquaintance with physiological and pathological processes, we are better able to judge the exact capability of such a remedy, and when we recognize in it the power to modify the distribution of the blood, and to diminish pressure within the vascular system, then we

are moving on such lines as are well fitted to guide us in its employment. That it can do more than these things is probable. That it does act as a derivative, that it is a powerful though dangerous sedative, and that its employment facilitates the action of other remedies, is all possible, and although he believes that few would incline to employ it for such ends solely, its possession of such potentialities may render it of wider service than we anticipate when we use it.

On the Use of the Catheter in the Large Air Passages.

The *Berl. Klin. Wochenschr.*, June, 1887, states that LANDGRAF endeavored to ascertain the site of the obstruction in a patient with all the symptoms of bronchial stenosis, in which it was impossible to state whether it was caused by compression of the bronchus, or by some process going on within its walls, the latter being the most likely. For this purpose he introduced a catheter through the glottis into the trachea, these parts having been previously anæsthetized by a 20 per cent. or 10 per cent. cocaine solution. The catheter was successfully introduced to a depth of 11.22 in. (28.5 cm.) from the incisors, without meeting an obstruction. This was the exact distance to the bifurcation, as was afterward ascertained by post-mortem measurements. As the stenosis was evidently in the left bronchus, the author, without inconveniencing the patient, repeated the introduction at intervals of from two to three days. Finally he succeeded in introducing the catheter to a depth of 11.6 in. (32 cm.), and at the same time relieved the patient from the choking spells with which he suffered. However, after a short time the patient had another choking spell, in which he died. The cause was found to be aneurism of the aorta descendens. The use of the catheter in the trachea and bronchi, with the use of cocaine, is an easily executed operation, which should be tried in all cases of bronchial stenosis. That in the case here under consideration it could only have a palliative effect, is clear; but in stenosis from other causes, particularly in syphilis, one could undoubtedly operate effectually, and even bring about a local treatment of ulcerated portions. In order to probe the right bronchus, it is recommended to slightly bend the end of the elastic tube, and to introduce the catheter along the left or right side of the trachea, in accordance with the rules observed in introducing the catheter into the bladder. —*Deutsche Medicinal Zeitung, No. 38, May 12, 1887.*

Kelotomy, with Radical Operation, for Strangulation in a Child Seven Months Old.—Cure.

Dr. WM. WOTKYNS SEYMOUR, of Troy, N. Y., in the *New York Medical Journal*, May 21, 1887, says: January 24, 1887, Tommie D., aged seven months, was brought to my office by his mother, who stated that from birth he had had a scrotal hernia of the right side, and that heretofore she had always been able to reduce it. This morning, however, she left the child in the care of a sister, and he cried a great deal. On her return from work, after several hours, she found the child feverish and crying constantly. Examination by her revealed the right side of the scrotum distended to the size of a medium pear, tense and painful. Her own efforts being ineffectual, she brought him immediately to me. I gave chloroform, but was unable to effect reduction by taxis. Finding that I could not reduce it, I, a half hour later, when my office hours

were over, gave the child chloroform, and, after brief and ineffectual taxis, did kelotomy. Even after opening the sac and incising the ring the gut could not be reduced, and it was necessary to break down some adhesions immediately behind the ring. The gut, previously dark-purple in color, became almost normal, and was easily reduced. I slit up the whole length of the sac, and, after stitching up the pillars of the ring with strong juniper catgut, ligatured the neck of the sac and dusted iodoform into the wound. The wound I closed with a deep continuous suture of juniper catgut. Over this I dusted iodoform liberally, and applied a pad of absorbent cotton and a spica. Ether and bichloride solutions were used to clean the skin and irrigate the wound. There was absolutely no fever at any time after the operation; the bowels moved the next day naturally; the bandage and dressings, having become soiled, were changed the fourth day, and union was perfect. To-day the cicatrix is firm, and there is not the slightest evidence of recurrence.

The Grafting of Human Bone.

On the 25th of November, 1886, a young man, seventeen years of age, had a complicated fracture of the right leg, about its middle, from which escaped a considerable fragment of the superior part. Succeeding this there were severe phlegmonous complications, the fractured extremities necrosed and were eliminated, resulting in a considerable loss of bone. In December, 1886, the fracture had not united, and the bones were from 35 to 40 millimetres (about 1½ inches) apart, with a fibrous cord uniting them. The fibula, which was intact, formed a splint for the tibia, and had prevented the union of the osseous extremities. M. Poncet then tried the experiment of an osseous graft, and executed it in the following manner: From a leg which had just been amputated, on account of traumatism, he took the first phalanx of the great toe, dissected away its cartilaginous surfaces, getting a fragment one inch in length, which he antisepticized in a tepid solution of corrosive sublimate of one to two thousand. The pseudarthrosis having been exposed, M. Poncet cut away the fibrous bridge, polished the two bones, and placed the osseous graft in the fibrous tissue so as to bring it in contact with the inferior fragment of the tibia. There was no reunion; careful antiseptic dressing was continued. Sixty-two days after the operation the graft was completely covered with fleshy granulations, except in a space of three to four square centimetres in the middle, where the bone appeared of a pale pink hue. The mobility of the pseudarthrosis persisting, M. Poncet decided to make a resection of the osseous suture. In performing this operation he removed the graft from the attached portions of the bone, and observed the following important facts: The graft was intimately united to the tibia at one of its extremities by a somewhat dense, tough, fibrous non-osseous tissue. Its entire periphery was covered by the fibrous tissue and a layer of more and more dense granulations. The bone itself was perfectly vascular and alive, eroded at some points by the granulations heaped against the surface. This result shows that legitimate hopes may be built upon this method.—*Le Concours Médical, April 23, 1887.*

Treatment of Gonorrhœa by Injections of Iodoformed Oil.

The treatment of gonorrhœa is an *odium medicinæ* to every practitioner, and the number of methods of treatment fully attests this fact. Whenever a new

treatment seems to succeed, its author immediately rushes into print to announce his discovery, and the credulous reader adops it only to find another bitter disappointment. M. PAUL THIÉRY of the Hôpital du Midi, has announced a method of treatment in *Le Progrès Médical*, but very judiciously premises that he does so with a certain degree of timidity after so many others have been tried, recommended, adopted and rejected. The method, in brief, is as follows: The urethra is first cleansed with lukewarm water, the water being caused to wash the urethra from the bulb forwards. The next stage of the procedure is to inject about eight grammes (ʒii)of a mixture of iodoform rubbed up in oil of sweet almonds. The patient must then hold the meatus closed for about twenty minutes. The author claims that the action is rapid and active. To be certain that the treatment was proper, M. Thiéry injected the patients himself, and in a series of six cases had the following result:

1.	1st	Attack.		Age	15	days.	10	Injections	Cured in	6	days.
2.	2d	"		"	15	"	18	"	"	18	"
3.	1st	"		"	4	"	8	"	"	5	"
4.	1st	"		"	8	"	24	"	"	11	"
5.	1st	"		"	8	"	29	"	"	22	"
6.	1st	"		"	15	"	16	"	"	8	"

These are very good results, and the results have been confirmed by a search for the gonococci of Neisser. The injections of iodoform seem to be less dangerous than those of nitrate of silver and corrosive sublimate, and at least as efficacious. As the author very pertinently remarks, the failure of success which often attends the treatment of clap is due, not so much to the treatment itself, but to the inability of the patient to properly inject himself. I have had very good success with corrosive sublimate injections, and this may be due to the fact that I have always been very particular in my instructions to patients in regard to the proper manner of injecting.—*St. Louis Med. and Surg. Journal.*

The Treatment of Cystitis and Urethritis by Irrigation.

Since washing out the bladder has become a recognized method of treatment of the affections of this organ, it has often been found that the introduction of the sound had an irritant effect upon the urethra and the neck of the bladder. Besides this the bladder itself is excited by the force which is not easily regulated, reacts against it, and becomes intolerant of it. M. LAVAUX proposes to do away with the sound, and to utilize only the force absolutely necessary to effect an entrance of the column of liquid into the bladder. For this purpose he makes use of a graduated bottle, holding a litre (one quart), with a rubber cork, which is pierced by two metal, nickel-plated tubes bent at right angles. One of these tubes, opening directly into the upper part of the bottle, receives exteriorly the conduit of a rubber insufflation bulb. The other tube, upon the end within the bottle, is provided with an extension piece reaching to the bottom, and exteriorly with an injection tube one and one-half metres (five feet) long, terminated by a canula with a nozzle, which penetrates the urethra to a point just beyond the navicular fossa. A 4 per cent. solution of boric acid is used at a temperature of 98° F. The injecting tube is filled and becomes a siphon by the aid of the rubber bulb, which is then put aside. The canula is introduced, the reservoir elevated, the liquid being allowed to enter the bladder until there is a desire to urinate. It is

found that the bladder thus becomes more and more tolerant. In severe cases of acute cystitis it is well to wash out the bladder twice a day; in the more chronic cases once daily is enough. When the cystitis is caused by a co-existing blenorrhagia, it is necessary, before making the irrigation, to cleanse the urethra in order not to reinoculate the bladder. Guided in this case also by the estimate of the hydrostatic pressure, M. Lavaux has found that at an elevation of twenty inches with a nozzle of one millimetre in diameter, no liquid will enter the bladder. The bulbous point is provided with two grooves allowing the reflux of the liquid, and in this way effecting the clearing of the urethral passage from within outwards. In this way the anterior urethra may be washed out several times a day, without danger of provoking cystitis; and followed by rapid recoveries.—*Le Concours Médical, June 6, 1887.*

Early Tracheotomy in Diphtheria.

Dr. EDMUND OWEN, in a letter to the *Brit. Med. Jour.*, May 21, 1887, says: Dr. Muirhead's letter in the *Journal* of April 9th, has caused me to peruse again Mr. Watson Cheyne's essay in that of March 5th, in which he suggests that tracheotomy be performed in diphtheria "as soon as it is certain that the larynx is affected," and that all membranous patches be frequently and thoroughly treated by antiseptics. He admits, however, that with children it is difficult to carry out the latter part of this treatment effectually. I would venture to submit that in actual practice it would be found impracticable. The sick and apprehensive child is worried even by the introduction of a spatula or spoon into the mouth, and the frequent swabbing of the throat would set him struggling, and would exhaust him in the extreme. And though with the tube in the trachea he could not cry aloud, his face would express such anxiety and distress that from sheer pity, or at the entreaty of the parents, the local treatment would have to be given up. Spraying with Sanitas water is generally all that one can do as regards local antiseptic treatment.

On the advisability of early tracheotomy there can hardly be two opinions, though the operation need not be resorted to directly the larynx is affected, for the child may quickly recover without operation, if the laryngeal affection be but slight. There is always a reasonable hope that the turning point in the disease is already reached. It is only when the dyspnœa is seen to be increasing that the operation is demanded, and this is determined by watching the child for a while. Prolonged expiration, a failing color in the cheeks, and increasing restlessness, afford other and important indications for operating. The doubt, moreover, in the mind of the medical attendant as to whether the time for opening the trachea has arrived or not, should be construed in favor of immediate operation.

In my experience, children with laryngeal diphtheria in private practice do not show nearly so good a percentage of recoveries after tracheotomy as do those who are at once taken to a hospital and are operated on at the first indication. In strangulated hernia it is just the reverse; the percentage of recoveries after operation is far higher in private practice, for there has been, as a rule, no temporizing, no delay, while in hospital work the cases of herniotomy are not nearly so successful.

At the Hospital for Sick Children, Great Ormond street, there have been, in a

little less than five years, 66 cases of tracheotomy for laryngeal diphtheria, out of which number there have been 25 recoveries—a percentage of about 38. And at St. Mary's Hospital during the last four years there have also been 66 cases (almost entirely amongst children); of these, 20 recovered, or about 30 per cent. In the total of 132 cases there have been 45 successful results, or a percentage of 34. I feel sure that if an equal number of tracheotomies in children with laryngeal diphtheria in private practice could be collected—not selected, as statistics too often are—the percentage of recoveries would not show nearly so favorably. I confess that my own cases have been so unfavorable that I should be little anxious to display them. As a rule I have been called in to operate as a last resource. In laryngeal diphtheria tracheotomy should not be regarded as a last resource, but as a most valuable therapeutic measure, if only it be performed early enough.

Mechanical Treatment of Hip-joint Disease.

Dr. NEWTON M. SHAFFER, of New York, and Dr. ROBERT W. LOVETT, of Boston, conclude an article in the *New York Medical Journal*, May 21, 1887, as follows:

It appears from our investigations that the amount of shortening of the leg is not dependent on the presence or absence of abscess, that it is less in children who are cured before ten years, and that it apparently increases after that age is passed. It also appears that shortening increases slightly after the joint disease is arrested, which seems to prove that the affected limb did not grow so fast as its mate.

Muscular atrophy is always present in hip-joint disease. It persists after the disease is arrested and the apparatus is removed, and it may often improve after treatment is stopped, but never wholly disappears.

The amount of motion in the joint when the disease is arrested and the apparatus is removed is very apt to diminish somewhat in the course of years; but recovery with perfect motion is not impossible, or indeed unlikely. The presence or absence of abscess has no apparent effect on the amount of motion obtained.

Ankylosis being the result most likely to occur, it is important to study the ultimate position of the limb, so that, if ankylosis occurs, the most useful position will result.

Adduction, rather than flexion, is the ultimate position to be avoided, and adduction is apt to occur after the joint seems to be free from inflammation and the apparatus is removed.

Non-deforming club-foot, or even a considerable degree of acquired talipes equinus, may occur when there is much shortening of the leg with flexion of the thigh.

True lateral curvature with rotation occurs very exceptionally, if at all, as the result of even great inequality in the length of the lower extremities, only one case being found in the series, and that not a true rotation curve.

A comparison of the results here reported with the published results of excision of the head of the femur leads the authors of this paper to the conclusion that the conservative methods of treatment here described promise much better ultimate results than the excision of the joint, aside from the greater mortality attending the operation.

We may briefly summarize the results of our investigations as follows: Of 51 patients discharged as cured over four years ago, 4 have died, 6 have had relapse, and 41 have apparently been cured of the disease. Of the 4 who died, 2 only had presumably tubercular disease, the other 2 dying of an acute lesion. Of the 6 who had relapse, 2 are now under active treatment with a prospect of speedy cure, and 2 have been cured a second time. One has been in bed a year after excision of the joint, the other is on crutches. Of the 41 who recovered there is not a single individual who is incapacitated from doing a full day's work at his or her trade or occupation. Only one, a boy who had suffered from both Pott's disease and hip-joint disease, used a cane, and none used crutches. There are, among those who recovered, printers, glaziers, machinists, errand-boys, shop-girls, dress-makers, and many children attending the public schools—all at their work and none with evidences of active tubercular disease or any serious incapacity arising from the condition for which they were treated years before.

Tracheotomy.

Mr. WALTER WHITEHEAD, surgeon to the Manchester Royal Infirmary, says, in the *Lancet*, April 30, 1887: The operation of tracheotomy is in many cases confessedly a difficult one to perform. This is emphatically shown by the amount of literature written upon the subject, by the many different ways which have been described and practiced, and also by the many dangers warned against. My excuse for proposing any change in the methods usually adopted is the simplicity of the plan I have to suggest, and the ease and success which have invariably attended its performance.

The operation is performed as follows: The head of the patient being bent well back over a pillow, an incision is made in the usual situation, but of rather greater length than is common. The incision extends through the skin and fascia, as deep as the interval between the sterno-hyoid muscles. The scalpel is now laid aside, and the raspatory used, not only to separate the sterno-hyoids, but to split the strong fascia which runs down from the hyoid bone to enclose the isthmus of the thyroid gland. This fascia is split to a distance extending from the upper limit of the incision down to the isthmus below—that is, supposing it is desired to open the trachea above the isthmus. The split fascia is then pushed to right and left with the raspatory. Should there be any difficulty in doing this, the fascia is separated to some extent on each side from the upper border of the isthmus. Proceeding carefully, the isthmus itself can be pushed down and the trachea exposed to the necessary extent. If the trachea is to be opened below the isthmus we proceed in a similar manner, remembering that here, however, we have between the fascia and the trachea a quantity of areolar tissue in which lies the inferior thyroid plexus of veins. The front of the trachea can in this way be cleared perfectly, and, since the method is bloodless, the rings of the tube are seen glistening white at the bottom of the wound. The trachea can now be fixed readily between the left index finger and thumb, and opened to the desired extent. There is little or no difficulty in introducing the cannula, since the trachea can be so steadily fixed and the incision into it so clearly seen.

The above method resembles in many particulars the "bloodless" method of Bose, but in the latter operation the scalpel is used to a much greater extent

than in the operation here advocated, and when the scalpel is not to be used the use of the director is advised. But the walls of the veins in this region are very thin, and the sharp edges and points of the director have been frequently known to tear these vessels and rob the operation of its bloodless character. This tearing of the veins is much less likely to occur if the raspatory is used. Moreover, the above operation with the rasparatory is not only suitable for cases where the surgeon has abundant time at his disposal, but is advised even in emergency tracheotomy; since although perhaps a little more time is required to reach the trachea, the certainty that when once reached it can be quickly opened and entered is a distinct ultimate gain. What is urged in favor of the operation is —first, the ease with which it can be performed; secondly, the small number of instruments required; and, thirdly, the manner in which it meets the four difficulties usually enumerated—viz., of reaching the trachea, of hemorrhage, of opening the trachea, and of introducing the cannula. Again, it avoids, in an especial manner, those dangers met with when the operation is performed, as it too often is, practically in the dark, from the bleeding, and the not sufficient separation of the parts; thus it is impossible, in this operation, that the cannula should be pushed down between the trachea and the fascia lying in front of it, or that it should be thrust, as has actually happened, into the internal jugular vein. Our resident surgical officer, Mr. J. Collier, who is frequently called upon to perform tracheotomy in emergencies, has definitely adopted the operation described since seeing me open the trachea some months since for the extraction of a gun-cap accidentally inspired into the trachea.

The Treatment of Intra-Peritoneal Injuries.

An editorial in the *British Medical Journal*, May 7, 1887, says: This subject is of especial interest, because of the serious nature and disastrous consequences of wounds of the abdominal walls and viscera, and also on account of the immense progress which has recently been made in the surgical treatment of these injuries. No department of surgery has derived more advantage from that systematic cleanliness which is the basis of our modern system of antiseptics. The old belief in the necessarily fatal character of such injuries, and in the utter futility of operative interference, has given place to a well-grounded hopefulness and a spirit of surgical enterprise, scientifically bold without being rash, which have been the means of saving many a life that would formerly have been condemned.

The expectant treatment which our predecessors adopted, for want of better methods, is no longer considered justifiable, and no surgeon worthy of the name would now allow a case of supposed visceral injury to develop unequivocal symptoms of traumatic peritonitis without doing his best beforehand to ascertain and remedy the injuries which may have been inflicted.

To one who, like Sir William MacCormac, has had great experience on the battle-field, such a subject must naturally be congenial. One-tenth of the fatal cases on the field are due to some form of abdominal injury. Although the hurry and excitement of war do not offer a favorable opportunity for successful surgical intervention, still the frequent occurrence of wounds of this kind, and their extremely fatal nature, cannot but excite the interest and attention of those whose lot it is to witness them. The oration delivered by Sir William MacCor-

mac at the annual *conversazione* of the Medical Society on the subject of abdominal section for the treatment of intra-peritoneal injury, gave him an opportunity of reviewing the progress which has been made, and of summing up the knowledge that has been gained, on this important subject. Most surgeons will probably agree with the orator when he expresses the indebtedness of abdominal surgery to Listerism, and the vast improvement both in methods and results which followed its introduction. Thanks to the confidence which experience of its efficacy has engendered, surgeons are now enabled to deal with these cases with a success that would have seemed incredible to surgeons of pre-Listerian times.

Formerly the practice was to suture the abdominal wound, and hope for the best. If the intestines were wounded, death ensued in a large majority of cases. Now, however, if reasonable grounds exist for suspecting intestinal injury, the surgeon at once cuts down and thoroughly explores the abdominal cavity. If no trace of injury be found, he closes the wound and awaits with confidence the issue of the case. He need not reproach himself for having made a useless incision, the danger of which in itself has been reduced to a minimum. If, on the other hand, an incised, lacerated, or perforated wound of the intestines be discovered, instead of abandoning the case he stops the bleeding, fixes the cut edges in close and perfect apposition, and, after the usual cleaning of the peritoneum, replaces everything in position. Numerous cases are now on record proving the triumphs which modern surgery has already achieved, and the future looks yet more promising. By careful observation, confirmed if necessary by experiment, the surgeon learns the manner of dealing with the most sensitive and most easily inflamed tissue in the body. Each little step, each little improvement, helps the movement onwards, until the final result excites the wonder and admiration of those who remember the less daring and less successful practice of a not very remote period.

Since the possibility of successful intervention in cases of abdominal injury has been demonstrated, the great difficulty to be overcome has lain in the diagnosis. The symptoms of visceral injury, apart from hæmorrhage, are in many cases so obscure, and even so conspicuous by their absence, that the surgeon must often find himself in a very embarrassing position. To operate on an uncertain diagnosis is to expose the patient to an unnecessary risk, while to leave him until the diagnosis can be relied upon seriously lessens the chance of recovery. On the whole, Sir William MacCormac is of opinion that the former course is less dangerous to the patient than inaction.

Not the least interesting portion of the paper is the history of cases in which tentative operations have been performed for severe injuries involving rupture of one or other of the viscera. Though by no means uniformly successful, they mark the path which is to be followed in treating such cases, and point the way to better results in the future. The great point to bear in mind is the desirability of preserving, or, if necessary, restoring, the continuity of the gut. Not only is the patient spared the inconvenience of an artificial anus, but the risks of extravasation are in reality less when the cut edges of the gut are properly sutured than in the alternative proceeding.

The subject of the treatment of wounds of the intestines cannot fail to be of interest to surgeons generally. Even in civil life such cases are frequent enough

to render a knowledge of the best methods of treatment indispensable. Moreover, it is in civil life that the surgeon can interfere with the greatest hope of success. The injuries, as a rule, are less extensive, treatment is more readily available, and the conditions under which it is carried out are incomparably more favorable.

Sarcoma of the Female Breast.

Dr. S. W. Gross, in an exhaustive paper based upon a study of 156 cases, which appears in the July number of *The American Journal of the Medical Sciences*, finds that of the varieties of sarcoma, the spindle-celled, which include the fibrous, constitute 68 per cent., the round-celled 27 per cent., and the giant-celled 5 per cent. of all cases.

Of the entire number only 4, or 2.70 per cent. occurred before the sixteenth year, or during the developmental state of the mamma; 67, or 45.27 per cent., appeared between the sixteenth and fortieth years, or at a period when the breasts and genitalia are functionally most active; and 77, or 52.02 per cent., after the fortieth year, or during the period of their functional decline. Their etiology is most obscure, since their development is rarely traceable to injury or disease, and is not influenced by hereditary predisposition, while the social state and menstrual irregularities or arrest are surely unimportant agents in their production. Their growth might naturally be expected to be connected with menstruation, pregnancy, or lactation, or with conditions which render the mammary gland more vascular; but the influence of an increased flow of blood to the organ, which has been assumed by certain authors, is not confirmed by an analysis of the cases that he has collected. Thus, in only three examples was an increase in bulk witnessed at the menstrual period, while in two the tumor became smaller. In one the rapid growth began during pregnancy, and in two at the menopause.

During their further progress sarcomata continue, as a rule, mobile and free from superficial or deep attachments; the contiguous structures are not invaded by tumor elements; the skin remains natural in color and texture; the subcutaneous veins are not enlarged, the nipple is normal, and the associated lymphatic glands are not contaminated. To these general statements the following exceptions were noted:

They are locally infectious in 14.19 per cent. of all cases. The skin is ulcerated in 18.59 per cent., and discolored in 23 per cent. The superficial veins are enlarged in 15.39 per cent. The nipple is retracted in only 3.25 per cent. The axillary glands are infected in only 1.9 per cent., and their immunity is a valuable sign in the differential diagnosis. A discharge from the nipple occurs in one out of every nine and a half of cystic sarcomata. Pain is met with in 35.71 per cent. of all cases.

Sarcoma is eminently malignant. Thus of the 92 cases only 1 ran a natural course, it being an example of round-celled tumor of both breasts, that proved fatal, with presumed secondary deposits, in seven months from the first appearance of the disease. The remaining 91 were subjected to the knife. Of these, 32 were well for periods which varied between one month and ten years and nine months; 42 were marked by local recurrence; in 8, not only was there regional reproduction, but metastases were found post-mortem; 3 recurred, with unmistakable evidences of general dissemination; 4 were characterized by metastases,

and 2 by presumed metastases, without recurrence. In other words, 64.83 per cent. of these cases were endowed with malignant features.

Of the 53 cases in which the disease recurred locally, in more than one-half, or 57.7 per cent., the return took place in six months, while after twelve months there were only 13, or 28.8 per cent., and of these there were only 4, or 8.8 per cent., after two years. These statements lead to the belief that the chances for the patient are relatively good after the lapse of two years, and that the prognosis is all the more favorable as the period of freedom from signs of local contamination prolongs itself. As the latest date of reproduction was four years, it may be assumed that the 12 cases which remained well after the lapse of that time were permanently cured. The average date of recurrence was 10½ months, and the total life of these patients from the first observation of the disease to the final report after the last operation was 7 years and 9 months. The number of recurrences, or operations for recurrence, was 1 in 23 cases, 2 in 13 cases, 3 in 7 cases, 4 in 1 case, 5 in 4 cases, 6 in 2 cases, 7 in 1 case, 12 in 1 case, and 22 in 1 case.

Sarcoma is less infectious locally, but more infectious as regards the general system, than carcinoma. Its more relatively benign character is shown not only by the larger proportion of cures, but also by the fact that the average duration of life, from the first observation of the disease to the date of the last removal after operation, is forty-two months longer; and this contrast becomes the more striking when it is stated that the majority of the sarcomatous patients were still living, and the majority of the carcinomatous subjects were dead.

Not only is this statement true for sarcomata in general, but it holds good for the three varieties, since the average life for round-celled sarcoma is fifty-four months, ninety months for the spindle-celled, and one hundred and eight months for the giant-celled.

The treatment may be summed up in a few words. The entire breast, along with any skin that may be invaded, must be extirpated, especial care being paid to the complete removal of every particle of paramammary fat and the fascia of the pectoral muscle, in which tissues experience shows that recurrence takes place. In the event of repullulation the growths should be freely excised as fast as they appear, as such a practice not only prolongs life, but may bring about a final cure.

Precocious Gummata.

The close and widespread study of syphilis within the past fifteen years has conclusively shown that the old and dogmatic division of the disease into three sharply marked periods must soon be very much modified, or perhaps even discarded, and that, although the terms primary, secondary, and tertiary, as applied to stages of syphilis, present the advantage of clearness and simplicity in study and description, and may even be clinically true as regards a large number of cases, yet there are very many in which such a division is inappropriate, since we observe in some the so-called tertiary lesions in the secondary period; in others seemingly secondary lesions in the tertiary period, and perhaps coëxisting with well-marked lesions of that period; or, again, cases of tertiary lesions concomitant with secondary lesions. To hold, then, that superficial lesions belong to and are only found in the early or secondary period, and that they are followed later on by lesions involving the tissues more profoundly, is in reality to sacrifice facts for simplicity of description.

Though there exist comprehensive descriptions of precocious nervous, osseous, articular, ocular, superficial ulcerative dermal affections due to syphilis, a systematic description of the clinical history of precocious gummata is wanting. In *The American Journal of the Medical Sciences* for July, Dr. ROBERT W. TAYLOR presents the clinical histories of a selected number of his cases, from which he traces a clear and satisfactory description of these not commonn or yet infrequent eruptions. His studies convince him that there are three forms of the precocious gummata: The first, the generalized form; the second, the localized form; and the third, the neurotic form, which in some of its features resembles erythema nodosum. Of each of these three forms, moreover, there are two varieties: a resolutive, or non-ulcerative, and an ulcerative variety.

The clinical history of the generalized form of precocious syphilide is as follows: As early as the eighth week of infection the patient notices either small circumscribed swellings under the skin, generally unattended with pain, and only perceptible to the touch, or this stage may escape him, and his attention is at first arrested by a number of bright red spots. These gummata are found to be round tumors of the size of a bean, deeply set in the skin, having a bright red color which at the first is dissipated by pressure, but becoming deeper, more sombre and permanent in color later on. They increase peripherally quite rapidly, so that within a week or ten days they may attain an area of an inch or an inch and a half. In general a goodly number of tumors appear scattered symmetrically over the whole body. As they grow they are followed by new ones which come along with greater or less rapidity, in proportion as internal medication is pushed. If appropriate treatment be instituted, the first crop may be the only one. Unaffected by medicine their evolution continues, and in a fortnight the arms, forearms, perhaps the scapular region, not infrequently the back and anterior surface of the trunk, the gluteal regions, thighs, and legs, are invaded by these tumors.

The course of these gummata is in general quite regular, and not subject to great variation. When developed they present a quite firm sensation, and this may be termed the period of condensation. As they grow older the red color becomes rather coppery, and while the periphery of the tumor may or may not seem firm, the central portions appear softer to the touch, conveying the impression that the tissues are permeated with a thick fluid. This we may denominate the stage of softening. In the majority of the cases there is not abscess formation, but rather a liquefaction of the gummy infiltration, which is, in general, promptly absorbed. The time occupied in the full development of these tumors is usually from ten days to two weeks, and after that their period of duration is variable.

In the ulcerative variety, the stage of condensation is very short, and softening in a marked degree is observed in a few days. The centre of the tumor assumes a dark red color in one or in several spots, and a sensation of fluid under the epidermis is distinctly made out. Then slight ulceration may occur in spots, often at the openings of the hair and sebaceous follicles, and very soon the epidermal roof of the tumor melts away, and we soon see the gummatous ulcer with its slightly thickened, reddened, undermined, and perhaps everted edges, and its floor of a greenish-red, bathed in an unhealthy sanious pus.

In the *localized* form, the clinical history is similar to that preceding. The clinical history of the *neurotic* form has an individuality of its own. In the very

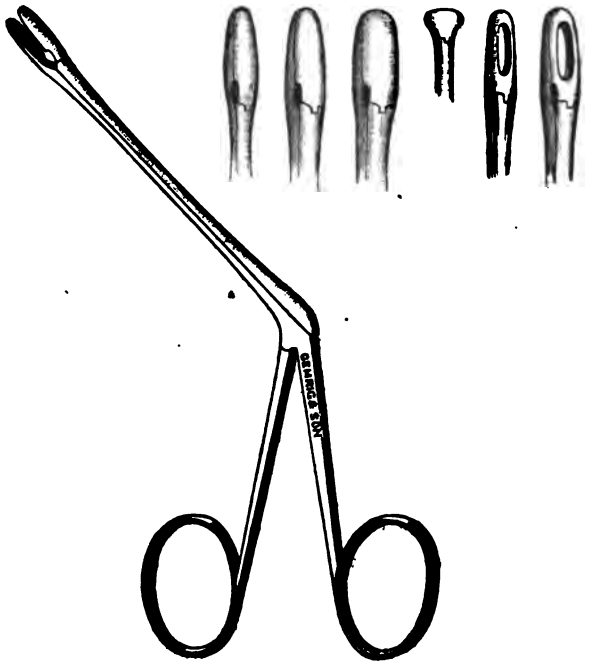
early months of the diathesis, either in the stationary period of an early syphilide or at its decline, generally preceded or accompanied by severe neuralgic symptoms involving any cutaneous nerve, by severe cephalalgia, continuous or nocturnal; by rheumatoid pains in muscles or joints, and by general malaise and debility, this eruption makes its appearance with more or less promptitude, and develops quite rapidly. In some instances the invasion is very acute, so that at the end of a week we may find fully developed tumors an inch or two long; in others and in the majority of instances the development is slower, and nearly two weeks elapse. Besides the general neuralgic symptoms, local pains on the sites of the lesions or in the whole territory on which they are developed are experienced. These may be continuous or intermittent, and in some cases are as excruciating as in severe herpes zoster.

The eruption consists of two orders of lesions; first, tumors or nodosities seated in the subcutaneous tissue, and freely movable under the skin and over the fasciæ, though as they increase they may contract adhesions on both surfaces; second, oval or round tumors, or irregular plaques from fusion of tumors. The appearance and cause of the tumors are fully described.

In all cases of precocious gnmmata, the use of iodide of potassium is indicated, either combined with a mercurial or with the use of inunctions of mercurial ointment.

A Nasal Cutting-Forceps and Bloodless Nasal Operating.

Dr. A. B. FARNHAM, of Milwaukee, Wis., says: The instrument shown below has been of service to the writer, and is presented in the thought that it may help others.



One great need in nasal work is that the operator should see what he is doing,

and, other things being equal, that is the best instrument which least obstructs the vision.

A set of special burrs made for the dental engine gave me vision, but a trained assistant was needed and the work had to be finished by other aids, and the personal equation remained unsatisfied till I had these instruments made. Have been using them nearly a year, and, in addition to giving perfect vision, they enable one to operate with great rapidity. Have attempted no operation against time, but can and have repeatedly removed within a minute the ordinary ridge on the septum of an inch or an inch and a half in length. Over the saw it has the advantage of causing far less shock, of injuring in the operation no other tissues than the ones attacked, of going around a corner and finishing at once what may require a second or third operation, and, on the other hand, the disadvantage of not being able to take off a growth of broad base. But then they were never designed for this work. For this I have used and still use the burr, or the saws, of Dr. Harrison Allen, and, since their publication, those of Dr. Francke Bosworth.

Over Dr. Jarvis's set of instruments they have the advantage of giving better vision, and are of easier introduction and removal. They do not catch, and are preferable for trimming after the use of the burr. The smaller ones are so delicate that one can reach any portion of the septum, however high, and are sufficiently strong to remove any growth suitable for the instrument with greater accuracy and rapidity than by means of burrs. A very great practical point is that with these smaller ones one can probe as well as crush. A competent experience of two years with burrs made for me of special length and fineness, led me to discard them in favor of these instruments. Again, one can control their action better than that of the burr. With the burr, too, one cannot probe.

They are useful for removing portions of the turbinates. The one with the broader end was designed for work upon the middle turbinates. After destroying the overlying tissues, one nips off just the desired portion.

Twice within three days I have found them useful in removing a portion of the cartilage for stenosis at the orifice. Pulling the tissues well down that the cut might be made through the mucous membrane under cocaine, and then cutting down with the galvano-cautery knife, I have removed what cartilage was deemed necessary, the blades of the forceps acting very well as spuds as well. Both operations were bloodless.

Most of the operations within the nasal cavity should be bloodless. Many women and children are shocked at the sight of blood, and no one really enjoys bleeding, and besides obstructing the view, hemorrhage renders our work more tedious and less exact. Cocaine enables us to do almost everything without ether, and therefore makes more demands in other directions than were formerly made. Let the surgeon save himself, too, all he can. The more he works at ease, the less the nervous output.

By treating the growth on the septum, or portion of turbinated tissue, to be removed first with chromic or other acid, and then with the galvano-cautery as an additional precaution, most of the ordinary work can be done without hemorrhage. If not practicable to treat all the surface, touch the presenting portions, and better vision is gained, even if there is slight hemorrhage.

While presenting a nasal instrument, I would yet again protest against removing all abnormities on the septum. Very many of them are harmless and should be let alone, and others need not be removed wholly but only in part. The abnormalities have often so modified the adjacent structures that no good can come from surgical interference, but positive harm by making the passages too patent. We have had enough of anatomical surgery.

Hemorrhoids, Fissure of the Anus, and Carcinoma of the Rectum.

A. G. Gerster, M. D., Professor of Surgery in the New York Polyclinic, writes in the *Philadelphia Medical Times*, June 11, 1887:

This man was operated upon several years ago for external hemorrhoids. He now complains of difficulty in micturition and pain about the anus. On examination by palpation, I find a fissure, situated posteriorly extending up to the inner margin of the external sphincter. A fissure, especially one which is not recent, can be diagnosticated by the touch quite as well as by visual examination. The margins of the fissure are indurated, and can be distinctly felt by the finger of one whose touch is tolerably fine.

The patient complains of trouble with micturition. A simple examination of the anus of a nervous patient is frequently sufficient to stop the flow of urine. The connection between the nerves supplying the rectum, bladder, and adjacent organs is very intimate, and reflex irritation of the bladder manifests itself in many patients of a nervous disposition who suffer with irritation of the rectum. Thus certain persons suffering with prostatic disease will also suffer with spasm of the sphincter ani; and, *vice versa*, a patient who is very sensitive, and suffers with an internal hemorrhoid located near the prostate, will complain of difficulty in micturition. By examining such a patient, stretching the sphincter by the introduction of the speculum into the rectum, you may unintentionally stop urination, and it may become necessary to draw such a patient's urine with the catheter for ten days or two weeks after your examination.

In trying to ascertain the relations of the prostate in this case, I have come upon something which none of us need to have suspected. It is something which explains his whole trouble—the presence of the hemorrhoids, of the fissure, and also the difficulty with his bladder. There is just above the prostate and behind it, at a point which I can just reach with the tip of my index-finger, a pathological change encircling about two-thirds of the gut; a crescent-shaped indurated mass, constricting the rectum so that the end of my index-finger will only comfortably pass through it. It is situated more to the right side of the patient, is apparently attached to the prostate; the mucous membrane of the rectum is still movable over it. It is apparently a growth taking its origin from the mucous membrane, but not from its surface. It is not an epithelioma in the ordinary acceptation of the term. Epithelioma of the rectum is a cancerous new growth which takes its origin from the epithelial covering of the surface of the parts. This seems to me to be rather an adeno-carcinoma, the greatest part of which consists of epithelial elements. The disease is probably started in one of the muciparous glands which occupy the interior of the mucous tissue of the rectum, and, therefore, has not ulcerated, as epithelioma is very apt to do very

soon, on account of the macerating effect of the moisture in the rectum in which it is constantly bathed. An epithelioma of the tongue is an ulcer from the beginning, because of maceration of the surface of the epithelioma from the presence of saliva, which keeps the horny epithelial matter of the diseased portion washed away. The same thing occurs in the rectum when the epithelioma begins on the surface of the mucous lining.

This man is forty-six years of age, about the age when carcinoma is most common. He has lately lost a great deal in flesh. It is probable, therefore, that this adeno-carcinoma will go on increasing in size and thickness. In fact, everything about the case points to rather an unfavorable prognosis.

When there is a new growth, rapidly increasing in size, located near the neck of the bladder, it does not necessarily involve the prostate nor the interior of the bladder, although bladder-symptoms may be present. It is sufficient if it be near enough to irritate the nerve-filaments which go to the neck of the bladder.

The lesson which I wish to draw from this case is of the utmost importance to the success of the surgeon. Never let a patient with rectal symptoms go away from your office without giving him a thorough examination—without making all you can of that first examination. At least do not let him go away with your opinion of the case unless you have made the necessary examination of all the parts. If I had simply told this man that he had hemorrhoids, which was all that I discovered on external inspection, I should have stated the truth, but not the whole truth, and certainly not the essential part of the truth. Examining further, I found a fissure in ano. But that was not all. Going still further, and examining the bladder and prostate, something was felt high up in the rectum which at once threw light on the whole of the complex symptoms of which he complained, giving us a clear insight into the case, and enabling us to make an intelligent diagnosis and to decide what we can do and what we cannot do for the patient. If we had treated this man for hemorrhoids alone, we would have expected a cure, and would have been disappointed. By and by we would have found the fissure, would have cut it; yet the patient would have come back to us in a worse rather than in a better condition. He would have become cachectic. A colored discharge would have appeared at the anus. Then some person would have put his finger inside and found an ulcerated tumor of the rectum. Of course the reflection would have fallen back upon the first physician who had treated the case for months without having approached a correct diagnosis of the man's condition. Yet, gentlemen, this sort of practice is not uncommon. It is seen in the treatment of rectal troubles the same as in the treatment of urethral troubles. You know that sometimes a patient comes into a physician's office and says he has a clap, and the doctor does not even look at him, but gives him a prescription and tells him what to do. He thus treats the patient weeks and months, and the patient all that time is expecting a good result. Of course, if the patient has happened to hit upon a correct diagnosis of his case, the doctor's treatment may prove of some benefit to him. But never rely upon the statement of the patient or upon a superficial examination which you yourself make, in giving an opinion about an organ like the rectum or the urethra.

Practical Points in Regard to Foreign Bodies in the Ear.

By RICHARD H. LEWIS, M. D., Surgeon for Diseases of the Eye, Ear, Throat, and Nose, to the Hospital of the Leonard Medical School, Raleigh, N. C.

The idea has suggested itself to my mind that, perhaps, as a general thing, from pride in our society and our desire to present something worthy of it, we are too apt to think our papers should embody something original, or should reach the dignity of elaborate essays. As a result, many of our very best men are deterred, either by modesty or want of time, from contributing, as they should, and under a different impression might, to the interest of our meetings. By throwing the light of their own observation and experience on the ideas and work of others, they could add no little, not only to the interest but to the value of our proceedings.

In accordance with these views, I desire to cast in my mite by making some practical reflections on foreign bodies in the ear.

A full consideration of the subject, it will be noted, is not intended. Indeed, it would be contrary to the principle laid down in the beginning. What I wish to do, inasmuch as I have not invented any new and ingenious instrument for their removal, nor devised any new method of using those already in vogue, is to call attention to and particularly emphasize certain things in connection with their surgical management. These things are: 1. The importance of being *certain* that there *is* a foreign body in the auditory meatus before any attempt is made to remove it. 2. The advisability, in attempting its removal, of first exhausting the resources of the syringe and warm water before resorting to instruments. 3. The objections to the use of the forceps; and 4. The dangers of doing too much.

It is a well-known fact that children are very much given to putting things in their ears, and some adults have the same weakness, though with the latter the presence of foreign bodies in the meatus is nearly always the result of accident. In consequence every conceivable variety of object, from a pea to a jaw-tooth, has been discovered in the aural canal, though such common objects as peas, beads, buttons, cherry-stones, pebbles, etc., are most frequently found. But the physician should never accept the testimony of the child or its parents as to its presence. Nothing should satisfy him but a sight of it with his own eyes—not feeling it with a probe, for many have been deceived by striking the bony wall of the canal. This ocular demonstration, unless the body be situated very near the entrance, cannot be made without some means of illuminating the meatus, and, therefore, every practitioner should be provided with a nest of ear specula and the ordinary perforated concave mirror, attached to a head-band, so that the hands may be free if occasion for their use arise. I almost feel as if I ought to apologize to the Society for dwelling on this matter; but not a few attempts, based on the testimony of the child or its parents, or by better men on the testimony of the probe, have been made to remove foreign bodies which were never in the meatus at all. And there are some cases recorded in which the too eager pursuit of this otic will-o'-the-wisp, if I may be allowed the expression, has caused the death of the patient. Such a termination would be sad enough if the result of a well-directed effort to remove something which might be dangerous if allowed to remain, but when the consequence of a crazy chase after an *ignis fatuus*, it is exceedingly deplorable, to say the least.

When it has been ascertained, beyond peradventure, that there is a foreign body in the canal, a judicious effort should be made to remove it. The first step *always*, with exceedingly rare exceptions, in this judicious effort, is the faithful and correct use of the syringe and warm water. I say *correct* use of the syringe, because the neglect of certain apparently trifling details will, in very many cases, make all the difference between success and failure. These details are, first, that the syringe should have a reasonable amount of power. The common glass syringe does not act well, but in the absence of a regular aural syringe, the Davidson will answer fairly. But no physician should be without the ordinary hard rubber aural syringe, which can be bought at any well-equipped drug store for seventy-five cents. Secondly, the nozzle should be quite small, so as to concentrate the force of the jet as much as possible. In this respect the Davidson is defective. A small nozzle can be made by drawing out a glass tube in the flame of a spirit lamp, smoothly sharpening a reed of small calibre, or, best of all, if it be at hand, by slipping one end of a piece of very small india-rubber tubing or flexible catheter over the large nozzle. One special advantage of the tubing is that, being soft and flexible, it can be pushed close up to the body without risk, and the full force of the jet in that way obtained. Thirdly, the meatus must be *straightened* by pulling the auricle firmly upwards, backwards, and outwards, and holding it in that position; while, fourthly, the stream is directed forcibly against the wall of the canal quite close to the body. The upper wall is to be preferred, as a rule; but if that fails, it should be tried against the other walls in turn. Although the body may fill the meatus so that no water can pass beyond it, still the whirling motion of the latter will often loosen and dislodge it. In fact, in an immense majority of cases, especially when the body is in the outer or membranous portion of the meatus, as it is almost sure to be if it has not been tampered with, the syringe will prove effective. In order to give the syringe a fair trial, it must be remembered that it should be used with considerable force. The presence of the foreign body will prevent any damage to the tympanum.

This method failing, the following may be tried: Make a clean stick of the proper size and adapt one end, as nearly as possible, to the shape of the presenting portion of the foreign body. See that the body is thoroughly cleansed and *dried*, more especially if there be discharge. Dip the fitted end of the stick in melted glue, and, quickly applying the same, hold it firmly in position until the glue hardens. If, upon withdrawing the stick, the pea or bead, or whatever it may be, does not come with it, the only thing left is a resort to instruments. The instrument one would most naturally think of is the forceps, but the forceps, as a general thing, is objectionable, for the following reasons: The bodies commonly found in the aural canal are usually more or less spherical, and they are, besides, nearly always hard—so hard that the teeth of the forceps cannot easily engage their surface. They are, too, for the most part of sufficient size to completely, or almost completely, fill the meatus. In consequence it is very difficult to find room for *both* blades of the instrument to pass between the body and the walls of the canal, so that when the forceps is closed the teeth, instead of falling on the opposite ends of a diameter, impinge upon the convexity of the outer half. The substance being too hard for them to take hold, they slip off, and as a consequence the object is pushed further in. "Hope springs eternal in the hu-

man breast," and we are very prone to think that the next time we will certainly succeed; and so repeated efforts are made, until the body is pushed beyond the isthmus, and then its descent to the drum is very easy. Knowing from my own experience how very apt one is, in the rush of active practice, to forget anatomical details which are not daily brought to his notice, I shall take the liberty of calling attention just here to the fact that the external auditory meatus is narrower a little beyond midway than at either end. In its relation to our subject, this is a very eloquent fact, for any one who keeps it in mind will be very careful in his manipulation not to urge the foreign body beyond that constriction.

The most efficient instrument is a vectis, or hook of some kind, the best, probably, being the fenestrated curette. An admirable instrument is the forceps devised by Guye, of Amsterdam. Being simply the obstetrical forceps in miniature, each blade is a fenestrated curette, and can be used separately as such, but it is better in many cases to introduce the second blade also, while the foreign body is held in place by the first, and, locking the two, to extract it. Gross' curette, which has a tooth at one end, is a simple and useful instrument. But fenestrated curettes, Guye's forceps, and such other special appliances for this purpose, do not usually constitute a part of the armamentarium of even the most advanced physicians, so that the matter practically narrows itself down, after all, to doing the best possible with the means at hand. A bent probe will often make a very effective hook, and every one has a probe. If mislaid, there are very few who cannot extemporize a hook of some kind, or a wire loop, which will answer to the fenestrated curette. The point to remember is that no means should be used which is liable to push the body any further in. And it should never be forgotten that no hard instrument ought ever to be introduced into the ear except under a full illumination, and the surgeon should never take a step unless he can *see* what he is doing.

In the fourth place, I wish to call attention to the fact that foreign bodies in the meatus are by no means such serious matters as is often thought. "Experience has taught," says Politzer, "that the consequences attributed to foreign bodies are, with few exceptions, due to the awkward attempts made at extraction by non-professional hands." He mentions the case of an old man from whose ear he removed a slate-pencil which had lain quietly unnoticed in the meatus for fifty years, and he also cites a case in which a pea remained for two years without exciting pain or inflammation. Unless the foreign body excites unpleasant reflex symptoms, as it sometimes does, those symptoms varying from a cough to marked interference in the nervous functions, and the syringe fails to dislodge it, it is often better for one not prepared with the necessary apparatus to do the work properly, to omit any attempt and let it remain. Remembering the statement of Politzer, cited above, we should make it a point, as occasion arises, to educate the laity in this matter by impressing upon them the risk of any one's attempting this apparently simple and trifling little operation who does not know exactly what he is doing. But according to the statistics, unfortunate consequences have, in a few instances, followed efforts at extraction made by members of the profession. It therefore behooves us to bear in mind the exceedingly important relations of the tympanum, and never to permit the fear of failure, or the desire to succeed in accomplishing an object, to cloud our judgment. Such a

caution, I am sure, is not needed by my hearers; but the idea of failure, even in the smallest matter, is so galling to some temperaments, and the courage necessary to its candid admission is, oftentimes, so great that it may not, after all, be superfluous.

Retention of Urine.

Dr. JOHN ASHHURST, Jr., Professor of Clinical Surgery in the University of Pennsylvania, in a clinical lecture published in the *Philadelphia Medical Times*, April 30, 1887, says:

I shall take this opportunity of making a few remarks on the subject of retention of urine. Retention must, in the first place, be distinguished from suppression. The latter is a much graver condition, and depends upon some fault in the kidney, either from organic disease or from sympathy with some other portion of the body. As a result the urine is not secreted, and the waste matters remaining in the blood soon give rise to symptoms of uræmia. In retention the urine is secreted but is not passed, and accumulates in the bladder. If there be free secretion of urine, and only retention, the patient may live almost indefinitely, particularly when the retention is of a chronic character, such as we meet with in the case of old persons with enlargement of the prostate. In these cases, retention more or less complete may last for many months. Some years ago a patient presented himself at this hospital, with the statement that his urine was running away all the time. He had been under treatment for paralysis of the bladder. On examination, the bladder was found to be greatly distended, the vesical tumor reaching to the umbilicus. There was a certain amount of dribbling, but the bladder had remained full of urine for at least a year. The whole trouble was due to enlargement of the prostate.

Retention of urine may be due to several conditions. It may be the result of spasm. If a person is obliged to hold his water for an unusual length of time, it not unfrequently happens that when he attemps to empty the bladder he finds that he is unable to do so on account of spasm at the neck of the organ. Retention may also depend upon certain general conditions of the system: thus, in typhoid fever retention of urine is a common occurrence. There it is due to the fact that the nervous system, being under the influence of the poison of the disease, fails to recognize the necessity of emptying the bladder. The bladder, under these circumstances, may become much distended and great harm result.

Among the conditions that more commonly come under the observation of the surgeon is what has been termed spasmodic stricture, which is a condition very similar to the spasm at the neck of the bladder already referred to. A person becomes chilled from exposure to cold, and when he attempts to pass water finds that he is unable to do so on account of spasm. There is another condition which is termed congestive retention. Under such circumstances there is probably always some organic change, some stricture, which under ordinary circumstances gives no annoyance; but, as a result of some cause, congestion takes place in the tissues around the stricture, and retention of urine ensues. This appears to have been the condition in the present case. The patient has had a stricture for many years; then, as a result of exposure, there was increased congestion, he was unable to pass his water, and it was found impossible to pass an instrument.

The most important causes of retention of urine are, however, true or organic stricture of the urethra and enlargement of the prostate. It is necessary to distinguish between these, as their treatment differs. Retention from stricture is a more dangerous condition than retention from enlarged prostate. If the patient be a young man, it is probable that the difficulty is not due to enlargement of the prostate, though there may be an acute prostatitis following gonorrhœa which may be accompanied by retention. The ordinary form of prostatic hypertrophy is to be looked for in those past middle life. It rarely occurs before the age of fifty years, while stricture is more common between the ages of twenty and fifty years. The age of the patient may therefore enable the surgeon to form an idea as to the cause of the retention. If the retention be not complete or constant, some information may be obtained by observing how the patient passes water. In stricture, although the urine may be passed in a narrow stream, it is passed with a certain amount of force. The propulsive power of the bladder is not impaired, and the urine may be projected through the stricture even more powerfully than under normal circumstances, in accordance with the law of hydraulics that the force of a stream is increased in proportion to the diminution of the calibre of the tube through which it flows. If there be enlargement of the prostate, the urine will dribble from the end of the urethra instead of being passed in the ordinary parabolic curve. In this condition, the cause of the obstruction involves the propulsive power of the bladder.

The use of an instrument is, of course, the most satisfactory method of determining the cause of the retention. If the instrument be arrested in front of the prostatic portion of the urethra, the obstruction is due to stricture, but if it be stopped in the prostatic portion we know that there is enlargement of the prostate gland. The distance at which the prostate is reached varies in different cases, but the average is six inches. If the obstruction be found at less than six inches from the meatus it is probably due to stricture, but if the distance be more than six inches the prostate gland is probably at fault. As I have already said, it is important to make the distinction between these two conditions, for not only does the treatment vary, but the urgency is also different. If the retention be due to enlargement of the prostate, you may temporize to a certain extent. There is not likely to be such acute distention as will cause rupture of the bladder, and the patient may with safety be allowed to go a certain length of time without active treatment. In stricture, however, the patient is in more imminent danger, and, unless relieved, rupture of the urethra may occur. Rupture of the bladder does not often result from retention due to stricture. If the bladder be distended, and the patient receive a blow over the pubes, rupture may occur, and the urine may escape into the peritoneum, exciting peritonitis, or it may be extravasated into the pelvic cellular tissue. If there be simply distention without violence, it is usually the urethra that gives way. The patient, after a violent straining effort, suddedly feels a sense of relief, the urine passes into the cellular tissue, and after a time gives rise to sloughing and gangrene, requiring free incisions to evacuate the effused fluid.

In retention from enlarged prostate it is usually possible to introduce an instrument without much difficulty, if a proper instrument be employed. The physician is apt to use the catheter found in the pocket-case, which while suffi-

ciently long for ordinary use, is not long enough to reach the bladder in many cases of prostatic obstruction. I have been called some distance into the country to empty the bladder in a case of retention from enlarged prostate, where the whole difficulty was due to the fact that the instrument employed had been too short. Sometimes there is enlargement of the prostate without obstruction. This occurs when the third lobe is not involved. In almost all instances, if the catheter be sufficiently long and of the proper curve, the retention can be relieved. A good plan is to have one of these long English catheters kept constantly over-curved. The catheter must not only be long, but it must be more than ordinarily curved. In order always to have one in readiness, it is well to keep the stilette over-curved. When the wire is withdrawn, the instrument will retain sufficient curve to pass the obstruction. Another good plan is to mould the catheter to the desired curve by placing it in hot water, and then fixing it in this position by immersing it in cold water. It will then keep the curve sufficiently long to permit the obstruction to be passed. There are special catheters made for these cases of enlarged prostate. Some are made with a large curve, while others have a short angular beak, as in the Mercier's or elbowed catheter. This instrument is straight for nearly its whole length, and then has an acute bend. This is sometimes useful, as the sudden rise of the beak enables it to slip over the obstruction.

If you are unable to introduce an instrument in a case of enlarged prostate, it becomes necessary to resort to some operative procedure. Tunneling the prostate has been recommended. This consists in taking a solid instrument, directing it in what is considered the proper direction, and then forcing it through the prostate gland. This is a dangerous procedure, and apt to be followed by hemorrhage. If you have to resort to any operation, the best plan is to tap the bladder. If the prostate be not large this can be done through the rectum, but if the prostate be much increased in size it is safer to tap above the pubis. This may be done very conveniently with the aspirator, but this has the disadvantage that the operation will probably have to be repeated as often as the bladder refills. It sometimes happens, however, that within a few hours after a patient has been relieved he is able to pass his water in the natural way. This also occurs after the use of the catheter, and the patient may go a considerable time without again requiring its aid.

Where the obstruction is due to stricture, and it is found impossible to pass an instrument, the urethra may be opened behind the point of obstruction. In this case I tapped the urethra at the apex of the prostate gland. Stricture, as you know, never involves the prostatic portion of the urethra, but is usually seated at the junction of the bulbous and membranous portions. If therefore an opening is made in the urethra at the apex of the prostate gland, you are certain to get behind the stricture. Such an operation is of course not adapted to retention due to enlargemet of the prostate, although even there it may be employed to facilitate the introduction of a catheter. In performing the operation, an incision about three-quarters of an inch in length is made in the median line of the perineum, beginning half an inch in front of the anus. The forefinger of the left hand is introduced into the rectum and placed at the apex of the prostate, which can be readily recognized. The knife is then inserted into the incision,

with its back towards the anus, and, guided by the finger in the rectum, is pushed onward until its point reaches the apex of the prostate gland. Having reached that point, you cut forward. This opens the urethra, which is at once known by the gush of urine. The knife is then withdrawn and a grooved director passed into the bladder, when, if the opening is not found to be sufficient, it may be cautiously enlarged. An elastic catheter is next introduced upon the director and secured.

The operation was performed in this case five days ago. We shall now remove the tube for the first time, and insert a clean catheter. The urine is beginning to escape by the side of the tube, and in a few days we shall dispense with it entirely. In the course of another week the urethra may be in such a condition as to permit the passage of an instrument, although when the operation was performed this was impossible. If a sound can be passed, we shall be able to cure the stricture by simple dilatation. If we are still unable to pass the stricture, I shall submit to the patient whether he desires an operation for the cure of the stricture, or whether he is satisfied to pass his water through the perineum. Many patients prefer the latter alternative, which is attended with no particular inconvenience. The sphincter power of the bladder is of course preserved, so that there is no incontinence. The only inconvenience is that in urinating the individual must assume a sitting posture. I have had patients who have submitted to an operation for the relief of the stricture, but, finding a tendency to re-contraction requiring the constant introduction of instruments, have preferred to abandon the urethra and pass water through the perineum.

The operation which I have described is adapted to cases of retention of urine due to stricture, and not to those due to any other condition. When the retention is due to enlarged prostate, and a catheter cannot be passed, the bladder must be opened either behind the prostate or above the pubis. For the simpler forms of retention from spasm, it is usually sufficient to put the patient in a warm bath and give an anodyne. If this is not successful, a remedy which was formerly much employed may be tried. This is the tincture of the chloride of iron. This has the effect of relieving spasm, and has been found to be very successful. Where you can do it, however, it is always better to relieve the retention at once by the use of the catheter, a soft instrument being preferred. It is not desirable to have the retention last even a few hours, for there is always a certain amount of damage done to the ureters and kidneys even in this short period.

QUARTERLY COMPENDIUM

—OF—

MEDICAL SCIENCE:

—A—

SYNOPSIS

—OF—

THE AMERICAN AND FOREIGN LITERATURE OF MEDICINE, SURGERY AND COLLATERAL SCIENCES.

EDITED BY

N. A. RANDOLPH, M.D., and CHARLES W. DULLES, M.D.

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I. ANATOMY, PHYSIOLOGY AND PATHOLOGY.

Typhotoxine.

BRIEGER was the first to demonstrate the presence in typhoid cultures of a toxic base called typhotoxine. Isolating this product of secretions of the bacilli and injecting it into guinea-pigs, he produced salivation, dyspnœa, dilatation of the pupils, diarrhœic stools, and death. Seitz and Sirotiuin found that death was produced as well by sterilized cultures as by active ones, the symptoms being those of an intoxication, not of an infection. Dr. Wyss (*Der Fortschritt; Lond. Med. Rec.*) has reviewed the literature on this subject and concludes as follows: 1. The symptoms following injections of cultures of typhoid bacilli are due to the toxic substances secreted by these bacilli. 2. The germs which secrete the typhotoxine are reproduced in the intestinal canal, and the ptomaine is taken up by the circulation. 3. It is probable that the same takes place in abdominal typhoid fever of man. 4. A first infection insures immunity against the injurious effects of even large quantities of the toxic substance. If the above theory is correct, observations with known quantities of the typhotoxine should be recorded, with a view of producing immunity from the disease in man.—*N. Y. Med. Abs.*, June, 1887.

The Function of the Ureters.

A. SAMSCHIN, after referring to observations made by others in cases of exstrophy of the bladder and vesico-vaginal fistula, reports his own experiments in a case exhibiting a large recto-vesico-vaginal fistula, in which, with the aid of a speculum, he was able to expose the openings of the ureters plainly to view. His conclusions are as follows:

1. Contraction of the ureters takes place in both man and the lower animals in a peristaltic manner. Each contraction results in the discharge of a variable quantity of urine.

2. The contractions at the vesical orifices of the ureters do not take place synchronously.

3. The number of contractions observed at the orifice of a ureter in a given time is not constant, but is found to vary with each observation.

4. The total quantity of urine discharged by each ureter in a given time varies, as well as the average quantity discharged by each in a single contraction; the latter quantity varies between 8 and 2 ccm.

5. The maximum of quantity discharged by a single contraction amounted to 4 ccm.

6. No increase in the number of contractions was observed to take place after the copious injection of fluids.—*Centralbl. f. Gynäk.*, No. 19, 1887.

The Influence of Vapor Baths Upon Disturbances of Circulation.

FREY had formerly established the fact that by vapor baths (hot air baths) the quantity of water in the tissues and in the blood can be very substantially diminished, so as to improve the constitution of the latter; and now he has accurately investigated the condition of the heart and blood stream during these baths. It seems that under the influence of the heat the heart's action is accelerated while the arterial tension falls; that *vice versa*, under the influence of cold (cold douche) the heart's action becomes slower while the arterial tension rises. The fall in arterial tension persists some hours after the warm bath.

Frey thinks that in these baths, quite apart from their use in the obese with symptoms of heart weakness, in whom they act excellently, we possess a very active, and when used with precaution, a safe remedy against rheumatic heart failure with slight disturbances of compensation. Note that the condition is that the heart failure should be simply rheumatic, that is to say, does not arise upon any arterio-sclerotic basis, and that the left ventricle should still exert an adequate measure of strength. The patients during the bath must be carefully watched over. The cold douche at the beginning is replaced by cool washings with alcohol; in short, there should be no neglect of precautionary measures. The result is then often striking; the patients feel better, freer. The treatment is assisted by a diet regulated after Oertel's prescription, and eventually by the use of the Swedish movements. It is self evident, therefore, that heart failure in rheumatics with good compensation is no contraindication to the use of hot air baths. Besides heart diseases, Frey has also treated chronic nephritis with the best results by hot air baths, while ordinary vapor baths are of great service to emphysematous patients.—*Schmidt's Jahrbücher*, June, 1887.

Syphilitic Broncho-Pneumonia.

Drs. BALZER and GRANDHOMME have recently made several necropsies of syphilitic still-born infants, and the result of their examinations proves that syphilitic lesions which are caused by microbes, like other inflammation, do not appear to preserve any specific character in their evolutions. With regard to the lungs, syphilitic pneumonia may be classed with broncho-pneumonia, in the same degree as secondary pneumonia in acute infectious diseases, such as measles, or in chronic affections like tuberculosis. Syphilis in the fœtus assumes the different forms of broncho-pneumonia and other lesions according to its violence and the degree of its chronic stage. The authors classify these forms of broncho-pneumonia as follows:

1. Recent or slight broncho-pneumonia, including pulmonary congestion, and lesions which are not apparent on microscopic examination.

2. Broncho-pneumonia or agglomerated nuclei disposed in a vertical band at the posterior portion of the lungs. These forms correspond, with regard to lesions, to subacute forms of broncho-pneumonia of other infectious disease, and insensibly assume the following type:

3. Broncho-pneumonia with white hepatization, without dilatation of the bronchi, corresponding to the hepatization of other forms of broncho-pneumonia. It may lead to fibro-caseous or gummy degeneration.

4. Broncho-pneumonia accompanied by dilatation of the bronchi. In conclusion, it may be said that pulmonary syphilis is identical at different ages.—*N. Y. Med. Record*, July 23, 1887.

The Relation of the Brain to the Stomach.

Our somewhat scanty knowledge on this subject has been increased by some observations of HLASKO (*Dorpat Dissertation*, 1887). Operating on 75 curarized and tracheotomized dogs in which brain and stomach were exposed, he made some valuable observations, which may be generalized as follows:

1. The centers for the contractions of the cardia lie in the corpora quadrigemina. The fibres transmitting these impulses were in the spinal cord as well as in the vagi, though the latter are the more important, since after cutting the vagi the contractions are far less powerful than before.

2. The centers for the walls of the stomach are also in the corp. quad., but the fibres course through the spinal cord. On irritating other parts of the brain contractions of the stomach walls never appeared.

3. The inhibitory center for the cardia, that is, the origin of the dilator cardiæ lies near the junction of the anterior and lower end of the caudate nucleus with the lentiform nucleus, not far from the anterior commissure. The dilator cardiæ then proceeds through the vagus. Irritation of the cortex in the neighborhood of the sulcus cruciatus has an inhibitory influence on the contractions of the cardia.

4. After destroying the corp. quad., apomorphia has no power in causing contractions in the stomach.

5. According to the above, there is no isolated vomiting center in the medulla. The existence of such a center is denied *in toto*, though his experiments point to the corp. quad. as a vomiting center in the pharmacological sense.—*Schmidt's Jahrbücher*, *No. 215.*

The Effect of Chronic Tobacco Poisoning on the Heart and Stomach.

Favarger *Wien. Med. Wochenschr.*, xxxvii, 11–14, 1887, reports the result of post mortem examination on the body of a man who had smoked to excess. Following immoderate smoking an attack of asthma came on, which disappeared, but left permanent dyspnœa and cyanosis. When seen by F. the patient had dyspnœa, frequent pulse (140–160 per m.); intellect was cloudy. There was no fever, on the contrary subnormal temperature (95.5°–96°) in the axilla, radial artery contracted, pulse small, both pupils contracted, and reacting slowly. In the beginning there was obstinate constipation, and on the twelfth day a laxative brought away the last normal stool. From the fourteenth day the stools were blackened and coffee-ground like altered blood. On the twenty-first day the patient died with symptoms of internal hemorrhage.

The autopsy showed dilatation and advanced fatty degeneration of the whole heart, a chronic ulcer in the pylorus, in the bottom of which a branch of the coronary ventriculi dextra had burst; hæmorrhage of the whole alimentary canal was the immediate cause of death.

The patient was over sixty years old. As there were no clinical or pathological signs of senile marasmus, F. thought himself justified in referring all the symptoms

to the nicotism, and explained the fatty heart as follows: The prolonged use of tobacco had caused a spasm of the coronary arteries and in consequence an ischæmia of the heart, which in turn led to fatty degeneration. The circulatory disturbances following fatty heart form a predisposing cause for the origin of ecchymoses and erosions of the gastric mucous membrane and ultimately an ulcer.

Beside that, F. thinks that the injurious constituents of tobacco, when swallowed, can act locally toward the formation of a gastric ulcer. According to F., chronic tobacco poisoning causes functional disturbances which in all probability stand in causal relationship to fatty heart, and to chronic ulcer of the stomach.

In treating such cases, F. advises temporary abstinence and objects to smoking on an empty stomach in all cases. As nicotine has been recognized in urine and perspiration, he advises diaphoretics and diuretics as rationally indicated in expelling the poison.—*Schmidt's Jahrbücher*, No. 215.

A Cycle of Tuberculosis Infection.

Besides cases of infection of tuberculosis in the human subject as described in Dr. KNIGHT'S paper in another column of this *Journal*, well authenticated instances have not been wanting of transference of tuberculosis from man to animals, and vice versa. The domestic fowl has been known to prove an easy prey to this species of infection, as when the sputum of a consumptive patient was cast into a barn-yard, infecting a whole flock of hens. The following case, reported by Dr. Lamallerée, of the Congress of the French Scientific Societies, in Paris, and recorded by the French correspondent to the *Therapeutic Gazette*, shows the chain of contagion of tuberculosis (1) from man to man, (2) from man to animal, (3) from animal to man.

In 1872 a young man liberated from military service after he had been a prisoner of war, came to a small village, where he settled as a woodcutter. Although suffering from bronchitis, he married a young girl of the locality, but soon after he was taken with hæmoptysis, and died within a year after his marriage, leaving a child, rather delicate. The widow, who had been a strong, healthy girl, gradually became consumptive, so that in 1885 she had cavities in her lungs, profuse expectorations, and now she presents all the symptoms of an approaching end.

Dr. Lamallerée was recently called upon to see a neighbor of the widow just mentioned, a young woman whose antecedents could not lead him to suspect tuberculosis. The patient, nevertheless, was found to suffer from incipient phthisis. After long questioning, it was ascertained that within some four months she had eaten eleven chickens bought from her neighbor, and as her strength was failing she had roasted them very slightly, hoping to thus get more nourishment. From her house the doctor stepped into the widow's, whose case he knew well, to ascertain how the hens were fed, how they had died, and whether they were in the habit of absorbing sputa. On this point he received prompt satisfaction. As he was walking into the house he heard the widow have a fit of coughing, and immediately a legion of chickens ran in, as they are wont to when hearing the voice of one who feeds them, and began to fight around the bed for the consumptive's sputa. One of the hens having died the same morning, the doctor found in the animal seventeen soft tubercules; the liver was honeycombed with them, and the liquids contained many bacilli.—*Boston Med. and Surg. Jour.*

A Contribution to the Theory of Inflammation and Regeneration.

A paper by Dr. KARG with the above title (*Deutsche Ztschr. f. Chir.* xxv. 4 u. 5, p. 323, 1887) throws a great deal of light on the subject it considers. K. had an opportunity to examine a specimen from a fresh inflammation of the prepatellar bursa, and, assisted by methods for showing the karyokinetic figures, drew conclusions which are abstracted below. The preparations showed cell division figures both in the connective-tissue and endothelial cells of the blood-vessels.

"This seems to be a proof of the occurrence of progressive changes in the fixed cells during inflammation, that can not be upset." The microscopic result as detailed in the original and accompanied by two good illustrations "proves with all the certainty that our present histological knowledge enables us, that in certain stages of inflammations, caused by specific (i. e. bacterial) irritation, in addition to the alteration in the vessel walls there are changes in the tissues and fixed cells which are not alone degenerative, as Cohnheim taught, but which are regenerative, and lead to cell increase and new formation. But we are no more justified in assuming the origin of pus cells from fixed cells than we are in believing that epithelioid cells ever arise from leucocytes. The certain proof that the tissue-forming elements arise from the fixed connective tissue cells shows most positively that in the adult organism tissue formation, including that of connective tissue, always arises from pre-existing tissue. Further, the views of certain authors that organization of a thrombus proceeds from the endothelium of the vessel wall are made extremely probable. Finally, the apparent contradiction between the leucocytes of productive inflammation and suppuration is now explained by these observations. Roser has recently proposed to separate inflammation from those processes which lead to recovery (repair) as something entirely distinct. Karg, in opposition to this, proposes to divide inflammation into two divisions, of which the first can be named *infectious*, the other *productive*, or according to Hunter, *adhesive*.

"If the inflammation be not infectious the emigration of white cells remains within moderate bounds, and the tissues retain the excess. In consequence of the rich flow of transudate through the tissues the conditions of a better nutrition are furnished. The fixed cells undergo division and growth and lead to the formation of new tissue, which ultimately becomes a cicatrix.

In the infectious form, the production of pus soon overcomes the formative capacity of the cells, and at the height of suppuration these are annihilated by the inundation of leucocytes."—*Schmidt's Jahrbücher*, No. 215, p. 14.

The Capacity of the Liver to Make Sugar Out of Fat.

SEEGEN reviews as follows some recent investigations by Hertzka, of Carlsbad. The facts obtained from his researches into digestion prove beyond doubt that the liver forms sugar out of fat, yet it seems to the author interesting to know whether this transformation through the action of the liver cells could be recognized. For this purpose a dog was killed by being stabbed through the heart, two to three hundred cubic centimetres of blood drawn from his carotid artery, his liver taken out, and about forty to fifty grammes of pieces of liver were cut up very fine. These pieces were digested with the blood for five to six hours, at

the temperature of the body, an oil emulsion (of vegetable fat with gum and water) having been also added. He also added the like amount of gum to the liver and to the blood in the control experiment, as it was possible that the gum of the vegetable emulsion might exert an influence upon the formation of sugar. The bottles containing the mixture to be experimented with were connected with an aspirator, and a constant current of air drawn through to keep the blood arterial. In some experiments the author used emulsion of poppy seeds, after these were nearly reduced, as most other seeds containing oil are rich in sugar and carbohydrates, so as to reduce tincture quillija sap. This time the author did not determine sugar in the alcoholic extract of the decoction, but warmed the mixture of liver, blood, and eventually fat (in the control experiment the fat was wanting), and precipitated the albuminous bodies in the vessel, with chloride of iron and nitrate of sodium, as in treating the blood in the determination of sugar. The amount of sugar in the liver digested with fat regularly showed itself larger, and in truth the absolute quantity in ten separate experiments amouted to $\frac{1}{10}$—$1\frac{1}{2}$%; the relative quantity drawn from the original amount of the sugar on the average was 47.5%. In two cases, eight and nine, the quantity was proved by the fermentation test. Experiments with glycerine, soap and fatty acids gave the same results; the first two showed considerable increase of the sugar (from sixteen to sixty-one per cent., and from twenty-eight to ninety-two per cent. respectively); the fatty acids somewhat less (eight to thirty-three per cent.) In these experiments the proportion of the whole carbohydrates to the control pieces were found definitely and without exception to be higher in the liver treated with particles of fat—that is to say that besides sugar, other carbohydrates, and especially dextrin, are formed from fat. How this change is brought about is at present unknown. At all events, a considerable quantity of oxygen must enter into it if the sugar is to arise only out of a composition of the material containing carbon. It is very interesting, that the formation of sugar and of carbohydrates out of fat as a normal process in the life-development in plants, has been long known, as for instance, in the germination of seeds containing fat, starch and sugar are formed at the expense of the fats, in which process absorption of oxygen is necessary. The liver seems to be the great laboratory in which means for the nourishment of life are transformed for the performance of work and formation of heat, and this process occurs through the production of sugar. If the above supposition should be confirmed, that fat is made out of glycogen, then the sphere of action of the liver will experience a new significance. Sugar is not formed out of glycogen directly, though it is possible that it is transformed out of carbohydrates into fat and then into sugar. * * * These investigations place the administration of fatty foods upon a scientific foundation, though their usefulness in the dietary was long ago shown.—*Allgemeine Med. Central-Zeitung*, May 25, 1887.

Anthracosis Pulmonum.

At the stated meeting of the N. Y. Path. Soc., April 27, 1887, Dr. F. Peterson presented specimens of the following case:

G. R——, sixty-seven years of age, and a worker in the cleaning-room of a stove foundry, fell dead in the street. Dr. Peterson was sent by the coroner to

make a post-mortem examination, which took place five hours after death. The body was well formed and well nourished. *Rigor mortis* absent. The pupils were dilated. There was nothing abnormal about the brain.

Thorax: On opening this cavity both lungs were found bound to the chest-wall by old and strong adhesions. They were extraordinarily black over the whole surface, and strikingly hard and lobulated (very much like a cirrhotic liver, except that the nodules were larger). There were numerous patches of emphysema, the dilated and confluent air vesicles being in places the size of peas. There was œdema to a great degree in both lungs. In the left pleural sac was about a litre of clear serum. The whole upper lobe of the right lung was one extremely hard tumor, like a fibroma, and perfectly black on cutting through it. In this tumor was a small abscess the size of a hazel-nut. When the hands were brought in contact with a freshly cut lung-surface, they became discolored and blackened, as if one were handling bone-black with wet fingers. The bronchi, bronchial tubes, and trachea had clean, white mucosæ. The mediastinal glands were greatly hypertrophied, wholly black with carbon, and very hard. The pericardium contained sixty cubic centimetres of clear serum. The endocardium was exceedingly fatty, somewhat hypertrophied, and dilated. This fatty metamorphosis was, of course, due to the condition of the lungs. The mitral, pulmonary, and aortic valves were somewhat thickened, and at the bases of the pulmonary and aortic lunulæ were small calcified patches, but not sufficiently large to produce stenosis of the orifices. There was an advanced general endarteritis deformans.

Abdominal cavity: The *spleen* was a little enlarged, hard and very adherent to the diaphragm. The *liver* was small, very fatty, and everywhere strongly adherent to the diaphragm. There was chronic *gastric* catarrh. Both kidneys showed signs of senile atrophy. All the other organs were normal.

A certificate of death from fatty degeneration of the heart was made out. The most interesting pathological objects were the lungs, with their enormous quantities of carbonaceous matter, and also in the lymphatic glands in their neighborhood. Undoubtedly this carbon had caused fibrous phthisis, the pleuræ and peritoneum on the diaphragm subsequently becoming involved.

This man had worked in the cleaning-room of the stove works for thirty-one years. During all that period he had at no time manifested physical illness other than a "terrible morning cough," as his wife termed it. The cough he had had always while at this occupation. In this cleaning-room is brushed from the iron castings the charcoal dust which is used in their manufacture. The atmosphere of the room is so dense with carbon that one can scarcely see through it, and it is nearly irrespirable to one unaccustomed to it. There is also a small amount of sand in the air. ALL OF THE LARGE FORCE OF MEN EMPLOYED IN THIS ROOM SUFFERED FROM PULMONARY DIFFICULTIES. The case was interesting because it showed what devastation this occupation could cause in the lungs, and yet how assiduously one could pursue it without apparent shortening of his life. It was probable that this particular man had a fine constitution. But many others had spent a decade or more in the same room, without further detriment than the bronchial catarrh and cough.

Pasteur and His Vienna Critics.

M. PASTEUR has written a letter to the president of the Imperial-Royal Society of Physicians of Vienna in refutation of Dr. von Frisch's pamphlet and of Professor Billroth's comments, and the letter is published in the "Gazette médicale de Paris," together with a summary of the remarks made by Dr. Ullmann and Dr. von Frisch at the meeting of June 10th, at which it was read. M. Pasteur's letter is a dignified and argumentative statement, and it displays no resentment even in that portion where mention is made of Billroth's having applied to the writer's system of anti-rabic inoculations the derisive term *fiasco*. Incidental allusion is made to the unfavorable experiments of which De Renzi and Amoroso, of Naples, and Abreu, of Lisbon, have published accounts; but the writer contents himself with referring to a criticism of them by Dr. Gamaleïa, of the Odessa anti-rabic laboratory, contained in the "Annales de l'Institut Pasteur" for March 25th.

M. Pasteur remarks that Von Frisch's statements are so absolute as readily to seem decisive to a reader who is not well up in the matter, and that they had scarcely appeared when Billroth furnished his comments in the shape of an article which was published in the "Neue freie Presse." In that article Billroth denied the efficiency alike of the inoculations against rabies and those against anthrax in cattle and sheep, but Pasteur intimates that he depended for his data on the Berlin school, the views of which have undergone a change on further examination of the facts. Figures are then given showing the rate of mortality from anthrax in inoculated sheep during each of the last five years to have been respectively 1.08, 0.77, 0.97, 0.90, and 0.75 per cent., that of sheep not inoculated being 10 per cent.; and in inoculated cattle, 0.35, 0.35, 0.37, 0.50, and 0.28 per cent., that of cattle not inoculated being 5 per cent.

Having disposed of this side-issue, Pasteur turns his attention to von Frisch, to whom, he says, he had spoken of certain unpublished experiments of his own bearing upon the possibility of inoculating dogs with rabies after their intracranial inoculation with the virus of casual rabies; and had attributed prime importance to those experiments, on account of the confidence which they must inspire as to the efficiency of his method of preventing rabies; for no bite, he remarks, can be compared, as to the gravity of its consequences, to the insertion of the virus on the surface of the brain, as the latter always gives rise to the disease. Inoculation under such circumstances would furnish irrefragable proof of the virtue of his method for the prevention of rabies. To his surprise, however, Von Frisch, he found, had put forth this idea as having originated with himself. Pasteur's statement on this point is strengthened by his adding that at the same time he had made a similar suggestion to Sanderson and Horsley, of the English commission, and it is confirmed beyond doubt by his citing this passage from a report made to the Medical Society of Odessa in June, 1886: "M. Pasteur has proved that in some cases it is possible to prevent rabies even after inoculation, by trephining." But Pasteur says that he would not have insisted upon this matter of priority had not Von Frisch invested the test with extraordinary importance, holding it up as the only one capable of serving as the basis for a decision as to the efficiency of the prophylactic. This Pasteur now declares it is not, but only a proof *a fortiori*, a sort of experimental *tour de force*. It is true,

however, that Bardach, who reported ten successes in fifteen trials at Odessa, confirmed the exactness of Pasteur's results.—*N. Y. M. J., July 9, 1887.*

The Microbe of Cancer.

Dr. DOMINGO FREIRE, who claims to have discovered the preventive inoculation of cholera, has recently attempted to demonstrate the microbic nature of cancer.

Freire examined the blood of a cancerous woman and discovered in it zooglea capable of cultivation in gelatin kept at a temperature of from 37° to 40° C., and developing into bacilli 0.011 m. in length by 0.002 in breadth, enlarged at one extremity and resembling the bacilli, of typhoid fever. In the cultivation he observed also spores, zooglea and collections of small bacilli, which appeared to be the various stages in the development of the bacilli. Without determining whether he had cultivated one or many varieties of bacteria, Freire concluded that he had found the specific microbe of cancer, and that this microbe passes through two stages in its evolution. The first is represented by the micrococci in zooglea, and the second, more advanced, by the bacilli which are capable of living only outside of the blood, but are found in the cancerous juice which covers the ulcer. The writer does not mention the cultivation of these latter bacilli, and has apparently not determined whether or not they will produce bacilli like the former. To explain the cancerous cachexia he examined the urine of cancerous patients and discovered a ptomaine, which is very poisonous to birds, causing death with convulsions. But the recent experiments of Gautier and Bouchard show that even normal urine contains poisonous alkaloids, and the progressive development of the tumor in the organs essential to life would explain the cachexia. Freire then inoculated guinea pigs with the cultivation. He produced a slight wound and injected into it a solution containing the germs. At the end of a month one animal died, and the autopsy revealed the presence of a tumor about the size of a hen's egg, located in the left iliac fossa below the fold of the peritoneum. The tumor was soft, and on pressure exuded a viscid substance of about the consistency of brain. This is the most characteristic of all the experiments reported by the author. Microscopic examination of this tumor, as well as of the others obtained, demonstrated that they were encephaloid carcinomata. There were agglomerations of giant cells, and there was no doubt in Freire's mind that the tissue was really cancerous and produced by the inoculation. The experimenter also succeeded in attenuating the cancerous virus by passing it through a number of birds, and the animals that had been inoculated in this manner acquired immunity from the stronger preparations. The investigation demonstrated to a certain extent the nature of cancer, and indicated a method of treatment for this terrible affection, hitherto looked upon as incurable.

It will be interesting to refer here to the experiments of Gallippe and Landouzy, who communicated their results to the *Sociedad de Biologia.* These writers announce that they have discovered micro-organisms in fibroid tumors of the uterus and in ovarian cysts. The parasites are of three varieties, 1: spherobacteria in diplococci and in chains; 2, other micrococci, less common, smaller and forming cancer; 3, bacilli, isolated or united, forming threads. They succeeded in cultivating these microbes in warm gelatin, but did not make inoculation,

and in consequence no conclusions as to their pathogenetic properties have been reached. These authors compare these tumors with those found at the roots of the teeth, studied by Malassez, and express the opinion that they are both due to the penetration of microbes from the neighboring cavities, the buccal and vaginal. Myomata of the uterus are more frequent than myomata of all other organs combined, and ovarian and radiculo-dental cysts are those most frequently developed. Here, then, is a new field opened up to bacteriologists. Gallippe and Landouzy believe that many animal tumors are absolutely identical in their origin with many vegetable tumors known to be of parasitic origin. This is a legitimate deduction in general pathology, which will sooner or later be demonstrated. The idea of a *neoplastic diathesis*, advanced by Verneuil, is thus reduced to a question of soil and auto-inoculation—*Buffalo M. & S. J.*, August, 1887.

A New Theory of Respiration and the Heart-Beat.

At a recent meeting of the Imperial-Royal Society of Physicians, Professor VON FLESCHL propounded a new theory of respiration, of which I will give the chief features. He had sought to ascertain the utility of the heart-beat. It would be most unreasonable, he said, to have such a motor force as that of the heart simply to drive the blood mechanically into the vascular system—that work could be better done by a gradually increasing *vis a tergo*, and the heart-beat was dangerous to life by the consequent variations in the blood-pressure. Why did so many persons die of apoplexy? Because of the great oscillations of the blood-pressure caused by the action of the heart. The heart-beat must, therefore, have another purpose than the merely mechanical act of keeping up the circulation. Referring to the familiar fact of the sudden setting free of chemical constituents as the effect of concussion, the speaker remarked that he had shown on a previous occasion that it was the beat of the heart that set carbonic acid free in the right ventricle. Now, oxyhæmoglobin was of such a stable constitution that the affinity of the tissues for oxygen was too feeble to enable them to withdraw it from the combination. But the blood, charged with oxyhæmoglobin, was subjected to energetic agitation in the left ventricle, and the oxygen was set free by the action of the right ventricle; the blood of the left ventricle no longer contained oxyhæmoglobin, but free oxygen. In the first volume of his "Archiv," Pflugge had discussed the mechanical influence to which the blood was subjected in the heart, and had described the agitation which it sustained there, but he had not emphasized this phase of it, and had considered the change of surface as the chief feature. The speaker remarked that it would be a mistake to suppose that the blood that came out by the aorta was the same that had been carried to the heart by the pulmonary veins. Both the hæmoglobin and the tissues had a certain affinity for oxygen, and the purpose of the heart-beat was to settle the matter in favor of the tissues. To sustain his theory, the speaker mentioned the following facts: The oxygen could not be set free from a solution of oxyhæmoglobin, at a temperature of from 0° to 10° Celsius, unless the solution was shaken energetically; agitation with a spoon was not sufficient, but it must be subjected to repeated and decided shocks. Pflugge had known this fact, but he had not given it the correct interpretation. Approximately, one-third of the whole weight of the liver consisted of blood, the rest

being parenchyma. Why, with the organ inundated with blood to this extent, was the hepatic artery so small in comparison with the size of the portal vein? Why did the tissue of the liver become necrosed when the hepatic artery was tied? These matters were explained by the speaker's theory. The blood of the hepatic artery contained free oxygen, whereas the oxygen of the blood of the portal vein, although it surpassed the other many times in quantity, was so combined with hæmoglobin that it could be of no use to the liver. It was known from the experiments of Claude Bernard, Stricker, and Albert that the blood of the left ventricle was cooler than that of the right ventricle by some tenths of a degree. This had been explained by the suggestion that the blood circulating through the lungs lost a part of its heat by evaporation and by contact with the inspired air. Heidenhain, however, had shown that this theory was not correct. He had caused animals to inhale air that had previously been heated and supersaturated with aqueous vapor, but nevertheless there was a difference in the temperature of the blood in the two ventricles. The speaker's theory gave the key to the true explanation. It was known that heat was evolved in every instance of oxygenation. In the lungs the blood still held its third part of oxygen in combination, and it was for this reason that it was warmer than the blood of the right ventricle. As to the left ventricle, cooling was due to the freeing of oxygen from its combination. In the aorta no considerable reoxygenation took place, for the blood coursing through that vessel still felt the force of the cardiac agitation, and it was interesting to note that the blood there was still cooler, by two-tenths of a degree, than that of the left ventricle. The speaker illustrated his theory with several further facts, and said that he would give the full details in a work to be published in October.—*N. Y. Med. Journal*, July 9, 1887.

Chronic Tobacco Poisoning and Its Influence on the Heart and Stomach.

The following is a review by Duncan Burgess of a series of articles in the *Wiener Medizinische Wochenschrift*, Nos. 11, 12, 13, 14, by Favarger:

Although tobacco contains such a deadly poison as nicotine, and has been for centuries in common use all over the world, it presents a marked contrast to alcohol in the etiology of disease. Amblyopia and certain functional disorders may be caused by tobacco, but no change in the structure of any tissue has been proved to result from its abuse. Our author labors to support Kennedy's opinion "that fatty infiltration or degeneration of the cardiac muscle can be produced by long-continued tobacco smoking." To this end he discusses at length a fatal case which came under his observation. The most valuable part of the paper is a description, illustrated by short notes of nine selected cases, of the symptoms observed in patients addicted for decades to excessive smoking.

The symptoms of acute tobacco poisoning are due to nicotine. Amblyopia, however, has not been observed to follow poisoning by pure nicotine. It is, therefore, possible that chronic tobacco poisoning may differ in some respects from chronic nicotine poisoning. Picoline is said to paralyze the central and peripheral parts of the nervous system, and although picoline, pyridine, and other bodies, of which tobacco contains but traces, are neglected in acute poisoning, it

is conceivable that they may in time exert some influence on those who habitually smoke to excess.

Dr. Favarger's observations were made on cigar and cigarette smokers. His patients generally smoked at least a dozen cigars a day, and it took not less than twenty years to develop symptoms of chronic tobacco poisoning, In a female, cigarette smoking may cause symptoms in a shorter time, for one of the recorded cases is that of a married lady, twenty-eight years of age, who smoked thirty cigarettes daily. The diagnosis was usually suggested by complaints of palpitation of the heart, and it was clenched by forbidding smoking. "Cessante causa, cessat morbus." Often the warning given by palpitation was neglected, and, in due course, symptoms of a "weakened heart" made their appearance. The previously robust man became suddenly incapable of severe bodily exertion, on account of shortness of breath and sensations about the heart. If excessive smoking were still persisted in, the victim became liable to attacks of cardiac asthma. True angina pectoris was observed in one only, and that a doubtful case. Examination of the heart gave negative results in many cases. The area of cardiac dulness was either normal or moderately increased, and it was often difficult to feel the apex beat. The pulse was feeble, irregular in character and rate, being intermittent, dicrotic, or generally disorderly, and varying from 60 to 160 beats a minute.

The gastric and nervous symptoms were sensations of fulness and distention of the abdomen, pain and tenderness in the epigastrium, disordered digestion, irregular action of the bowels, faintness, disturbed sleep and insomnia.

The case completed by an autopsy was that of a male 60 years of age, who had for several decades habitually smoked an excessive number of Havannah cigars. When a younger man he had several attacks of faintness after smoking many strong cigars, but of late years his health appears to have been pretty good. Ten days before Dr. Favarger saw him he was suddenly seized, while smoking a cigar after dinner, with dyspnœa so severe that those about him thought he would be suffocated. The urgency of the attack passed off, but considerable dyspnœa persisted. When the author examined him the temperature was subnormal, the pupils contracted, the pulse small, but though he smelt of tobacco no nicotine was detected in the urine. During the last ten days of life the pupils remained small and reacted sluggishly; the temperature ranged from 34.6 to 35.5; the radial pulse continued small and very quick (140 to 100) except under the influence of digitalis, when it fell to 60. The respirations were about 30, and of the Cheyne-Stokes type. A week before death the stools were like coffee grounds. On the twenty-first day of the illness the patient died with symptoms of internal hemorrhage. Post-mortem revealed a dilated fatty heart, and a chronic gastric ulcer with open artery on its base.

[The past history in this case gives but slight indications of recurring attacks of nicotinism or chronic tobacco poisoning. The after-dinner distension of the stomach, about which no remark is made, had doubtless more to do with exciting the fatal illness than the cigar which the patient happened to be smoking. The state of the pupils, the quick pulse, subnormal temperature, and other symptoms observed during the fatal illness, cannot be separated from the patient's age, his dilated fatty heart, and gastric ulcer.

The only question opened up by the case is this: Was the connection between abuse of tobacco and the state of the heart casual or causal? In the absence of alcoholism, chronic anæmia, atheroma, calcification or sclerosis of the coronary arteries, endocarditis, pericarditis, and other conditions predisposing to fatty heart, the author is certainly justified in attaching some importance to the presence of such a likely etiological agent as tobacco. His argument that nicotine, by influencing the trophic functions of the vagus, by contracting the coronary arteries, and possibly by a direct action on the cardiac muscle, may powerfully influence the nutrition of the heart, is theoretically plausible. He quotes the authorities to prove that pathological changes in the vagi may produce fatty degeneration of the heart; but the only fact ascertained about the condition of these nerves in his own patient, viz., that they responded to the action of digitalis, he ignores.]

*The Flexibility of the Metacarpo-phalangeal Joint of the Thumb.**

Some eighteen months ago, my friend, Dr. WILL. N. BEGGS, at present assistant physician of the St. Louis Female Hospital, while at my office noticed the flexibility of my thumb in manipulating an object of interest to us; and called attention to the difference in this respect between his own thumb and mine. His could be flexed at the metacarpo-phalangeal joint through an angle of not more than 45°, making when flexed to the greatest possible extent an angle of about 135° with the shaft of the metacarpal bone. Mine could be flexed through an angle of 90°. I thought it remarkable that there should be so little flexion of the digit at this joint in a hand otherwise as supple as his. On further investigation I found it a frequent occurrence.

The accompanying statement gives the results of the examinations of the hands of 417 individuals, made by Dr. W. N. Beggs at the St. Louis Female Hospital, by Dr. F. Neuhoff, assistant physician of the St. Louis City Hospital, and by myself, at random. In tabulating, the hands were separated into two classes: those in which the thumb could be passively flexed with comfort to the individual at the metacarpo-phalangeal joint through an arc of only about 45° or less, and those in which the amount of flexion was 90°, or nearly so. In rating the flexibility of the other metacarpo-phalangeal joints the four fingers were passively flexed together; if the general angle thus obtained was less than 90° it was rated good; if 90°, medium; if more than 90°, bad. There was a tolerably constant proportion between the flexibility of the first and the other metacarpo-phalangeal joints, but not an invariable one.

Of the cases in which the angle of the flexion of the metacarpo-phalangeal joint of the thumb was about 90°, there were males, 119; females, 135; age, 1 to 75 years: average 28 years. Eighty-eight were employed at hard labor; 96 at light manual labor; 70 had no regular manual occupation. In 172 the flexibility of the other metacarpo-phalangeal joints was good; in 81 it was medium; in 1 it was bad.

Of the cases in which the angle of flexion of the metacarpo-phalangeal joint

* Read before the St. Louis Medico-Chirurgical Society, by Frank R. Fry, A. M., M. D., Demonstrator of Anatomy in the St. Louis Medical College.

of the thumb was about 45°, there were males, 99; females, 64; the age, 1 to 82 years; average, 34 years. Sixty-six were employed at hard labor; 57 at light manual labor; 40 had no regular manual occupation. In 57 the flexibility of the other metacarpo-phalangeal joints was good; in 110 it was medium; in 6 it was bad. Total, 417 cases. In 61 per cent. the angle was 90°; in 39 per cent. the angle was 45°.

The examinations were made by three of us, the great majority of them by Drs. Beggs and Neuhoff, without any previous conference, the gentlemen who kindly assisted me simply going to work with brief instructions. Necessarily there was some difference in our methods, which if they had been more uniform would possibly have made the general result somewhat different. The result obtained, however, demonstrates sufficiently well the one anatomical fact which I want to call attention to, namely, that in a considerable proportion of hands the thumbs are of the stiff variety. I believe the two kinds, stiff and flexible, are to be found distributed without any special reference to the age, sex, social condition, or color of individuals. Statement No. 1 does not make this statement evident, in fact it may seem in a measure to contradict it. Statement No. 2, which shows the distribution according to age, tends to confirm it. This statement is prepared from the results of the examinations of Drs. Beggs and Neuhoff only. This explains the fact that the majority of cases of both kinds are recorded between the ages of 20 and 60 years, the institutions in which their observations were made containing comparatively few children or very old patients.

The two kinds are proportionately tolerably evenly distributed among the predominating ages. I have made many examinations of which I have kept no record, and am satisfied that any one making as many at random will find my statement to be true. Even in infants and young children decided differences in the flexibility of the thumb are to be found.

Of what practical benefit to science and society these observations may be I am unprepared to say. Sir Charles Bell says: "On the length, strength, free lateral motion and mobility of the thumb depends the power of the human hand." In the light of this statement, the truth of which is apparent, the subject would seem worth our notice. In these days of manual-training schools, wherein it is sought to impart to children of all social conditions a useful manual skill as well as practical mechanical knowledge, it is not impossible that some attention to the anatomy and physiology of the hand might help to explain the varying capabilities of pupils, or even become to some extent the basis of selecting for some of the various pupils more suitable occupations for their special attention. Might not a study of these and other facts in the same line assist, in some measure, to scientifically determine the probable proficiency of students of the different kinds of musical instruments and type-writers, and various other instruments and machines, the successful use of which requires much cleverness of manipulation? I believe it would be an interesting study to examine the hands of a large number of artisans, musicians, etc., noting what the several occupations to be investigated required of the hands, and then noting the relative proficiency with regard to the different kinds of hands. I have been content though to note an anatomical fact only, leaving to some more ingenious person an investigation of its physiological features, if it seem worth while.

Laryngeal Cramp of Musicians and Speakers.

Dr. THEODORE H. KELLOGG writes as follows in the *Med. Record*, July 23, 1887:

The motor disturbances to which attention is invited in this paper have, it is believed, received no formal description in treatises on laryngology, or in special works on diseases of the nervous system.

They may be defined as professional neuroses of motility, and they are to be classified in that large group of nervous diseases of which writer's cramp constitutes the most familiar type. Incoordinate and excessive action rather than loss of motion prevails in them, and hence Ross, not inappropriately, uses the expression "professional hyperkineses" as a collective designation for all forms of professional cramp, and in accordance with this nomenclature the term laryngeal professional hyperkinesis has been chosen.

The etiology of these laryngeal hyperkineses is as evident as their pathology is obscure. Clinical observation has established, beyond all doubt, that excessive functional activity is a cause of various forms of motor disease in groups of muscles of the extremities, and in all parts of the body capable of nicely coordinated voluntary movements. The motor troubles of writers, musicians, telegraphers, and of a host of manual occupations, confirm this fact as regards the hands and arms, and the observation is renewed for the feet and legs in turners, ballet-dancers, sewing-machine workers, and in many other trades. It would be a contradiction of physiological analogy and of etiological law if a similar sequence of disease were not to result from a like cause in the laryngeal muscles, which are capable of such complex associated movements.

The existence of the laryngeal professional hyperkineses might then be reasonably predicated on *a priori* grounds, but fortunately there are observed facts which form a basis for these disorders, and they will now be described. The symptoms and cases naturally fall under two main groups, which may be technically termed hyperkinetic and hypokinetic.

The hyperkinetic group is characterized by spasmodic and incoordinate action of the muscles of the larynx, of muscles immediately associated in phonation or in similar acts. To this group belongs the first case of laryngeal professional hyperkinesis which came under the writer's notice. The observation was made some years ago in a professional flutist—a German about fifty years of age, of large frame and strong muscular development, and in the enjoyment of apparent good health. Flute-playing in this instance was attended by spasmodic action of the adductors of the glottis, and of the tensors of the vocal cords, which were thrown into sympathetic vibration and produced a low-pitched and continuous sound, which was all the more annoying as it could not be prevented by any effort of will.

The only cause known for this affection was the too constant use of the instrument. The patient had made a common-sense diagnosis of his trouble, which he called cramp in his throat, and in speaking of its cause he said: "Das kommt vom zu viel blasen," and thus in a word he gave its true etiology. Gerhardt has reported a similar observation in a man who had already suffered from cramp of the arm, and the analogy between the two affections was thus very direct. In these instances certain sets of laryngeal muscles are called into gentle and concerted action, for there is naturally, the writer finds in his own use of the flute

(and no doubt it is true for other flute-players), a slight contraction of the cricothyroids and of the adductors of the glottis. But when flute-playing was carried to great excess in the above cases these muscles became hyperkinetic, and the constant spasms were such as to interfere with the patient's occupation.

It is well known that in writers the arm as well as the hand may become affected, and it is natural to suppose that in players on wind-instruments neighboring muscles of the laryngeal group would become secondarily involved, and it is probable that in them labial, lingual, and laryngeal hyperkinesis may exist synchronously.

Strümpell has already put on record a case of clonic lingual spasm in a clarionet player, who was thus incapacitated for his occupation. Adequate inquiry would probably reveal many similar facts, and the writer has already had verbal accounts of like instances.

In this first hyperkinetic group should be classed also those cases called choked voice, which are, in reality, instances of expiratory adductor spasm from continued vocal strain; and cases of painful larnygeal contractions briefly alluded to by Sée, of Paris; and, in fact, all persistent spasmodic symptoms of the singing or speaking voice due to its immoderate employment.

Instances from a like cause in which the voice habitually breaks from a chest to a falsetto tone, may perhaps belong to this category also, though the supposition of the spasmodic contraction of the vocal cords and of their vibration between nodal points is not fully satisfactory, for it is well known that in unilateral paralysis of the adductors, with vibration of the mere edge of the inefficient vocal cord, there is still falsetto phonation.

In this group, too, are to be included certain allied hyperkinetic conditions which are very rare and interesting. In these instances the rima respiratoria closes during expiration, and through involuntary action of the tensors of the inferior thyro-arytenoid ligaments, there are produced audible sounds, which receive accidental modification by the position in which the buccal, nasal, and pharyngeal cavities chance to be.

One such instance of expiratory tension of the chordæ vocales and of involuntary phonation has come within the writer's observation. A further symptom of interest in the laryngeal hyperkineses is that ordinarily the adductor spasm is excited only during forced expiratory efforts, and not during inspiration, even though it be voluntarily prolonged. To such an extent is this true that the patient may resort to the expedient of vocalization of the in-going current of air, and thus learn to speak solely with an inspiratory voice. It is probable that in time this inspiratory speech would become also spasmodic, though the only case known to the writer of spasmodic phonation during inspiration was in a stutterer whom he once treated, with only partial success, for some months.

It is well known that paralysis of certain laryngeal muscles may give rise to spasm of others, and when the laryngeal hyperkineses have been more thoroughly studied, it will likely become necessary to establish a mixed group in which paralysis and tonic or clonic spasm will be found to coëxist.

With this forethought as to future classification, the second or hypokinetic group of these disorders is mentioned. It is characterized by diminution or loss of power in the laryngeal muscles as the result of continued over-use.

In this connection belongs an observation made by the writer, of a man in fair health, who, during a series of many months, and for several hours daily, read foreign languages aloud. This vocal action was forcible, and sustained with unusual voluntary effort. The final result was paretic loss of voice, with painful sense of fatigue. The laryngoscopic appearances were normal, and there were neither local, catarrhal, nor general constitutional conditions to account for the symptoms. Voluntary reaction of the vocal muscles was simply lost through overstrain, as in the paralytic forms of professional cramp.

To this group belong some of those cases of loss of voice among professional singers and arduous aspirants for the operatic stage.

Teachers of vocal music speak of these cases as due to bad methods of voice training, and some of them are attended by inflammatory conditions, but a few cases free from all such complications can only be regarded as instances of hypokinesis of overtaxed laryngeal muscles. The paresis may simply reveal itself through inability to evenly sustain tones which may become clearly forced, tremulous, flat, or unmusical, or there may be loss only of a part of the range of the voice, as of the highest soprano or lowest bass notes. The defect of innervation in these instances presumably exists in the lateral crico-arytenoid, arytenoid, and thyro-arytenoid muscles.

In the description of symptoms only expiratory forms of spasm have as yet been noticed, but it is likely that some inspiratory spasms and certain cases of aphonia spastica are to be numbered among the disorders in question, and that the extrinsic as well as the intrinsic muscles of the larynx are sometimes involved in these forms of hyperkinesis.

The main symptoms, then, may be briefly summed up as incoordination, paresis, tremor or spasm of laryngeal muscles, displayed especially in expiration and during phonatory efforts.

The pathology of all the professional neuroses of motility is, to say the least, hypothetical. The theories of the myopathic or peripheral neuropathic origin of these diseases do not adequately explain all the clinical facts. The influence of heredity is not to be overlooked in these cases, which occasionally present a distinct "diathesis spasmodica" from earliest childhood. Of course, this instability of nerve-centres may be acquired as well as inherited.

The most plausible theory is that the laryngeal hyperkineses are of central origin—that the prime points of pathological irritability are, first, in cortical centres, and secondly, in the medulla oblongata itself.

The fact that the movements which become disordered are such as are voluntarily co-ordinated, and that they are uniformly initiated by cortical impulses, tends to confirm this view. A purely cortical phenomenon, too, is the painful consciousness of fatigue excited by the simple unexecuted idea of the customary movements.

The diagnosis of the professional laryngeal hyperkinesis is to be arrived at by a process of exclusion of certain well-known pathological conditions. Thus there are to be excluded all forms of pressure on the pneumogastric nerves by enlarged glands and various tumors, and on the recurrent laryngeal nerves by thoracic aneurisms; also, diphtheritic, rheumatic, syphilitic, and other diathetic or toxic states, attended or followed by motor disorders of the larynx.

It is also necessary to eliminate the early laryngeal crises of locomotor ataxia, the aphonia of hysteria, certain reflex spastic states, cases of balbuties spasmodica, and the phonetic incoordination of general paresis. In regard to the latter disease, it is to be remarked that professional singers who become cases of general paresis may present laryngeal hyperkinesis as the initial phenomenon.

A noted negro minstrel who died of general paresis under the writer's care had incoordination and spasm of laryngeal muscles months before the appearance of any other symptom, either psychical or somatic.

The differential diagnosis is not necessarily more difficult than in other cases of professional cramp which often have superficial resemblances to various motor disorders.

As the larynx, however, is less accessible to observation than the hand or other parts concerned in the professional neuroses of motility, the finer diagnosis of the muscles specially affected in any given case becomes admittedly somewhat difficult. In view of the great advances in modern laryngology, it is believed that it will soon be possible, in cases of speaker's cramp, as in those of writer's cramp, to decide with precision as to the muscles directly involved in every instance.

The prognosis in the laryngeal, as in other kinds of professional hyperkineses, is bad. The disease is usually of gradual development, and by the time that it is fully pronounced and recognized, it has assumed a chronic character.

In most singers and speakers attacked there is to be expected more or less permanent disability, and the exact prognosis will depend somewhat on the age and constitution of the patient, on the duration of the malady, and on the willingness of the sufferer to persevere in the treatment prescribed.

The treatment of the laryngeal hyperkineses has at least one uniform indication, and that is, complete rest of the muscles affected. All forced expiratory acts like coughing, laughing, and crying should, as far as possible, be avoided, and, above all things, voluntary use of the laryngeal muscles is to be forbidden.

Even the silent reading of musical scores common among singers provokes latent motor impulses, and is harmful.

In the case arising from the reading aloud of foreign languages above mentioned, even mental rehearsal of a few pages without vocalization excited a painful sense of fatigue referable to the larynx.

After attention to this first indication for functional repose, the observance of hygienic rules, change of climate and habits of life, hydrotherapy and topical treatment are in order.

Of local measures, electricity and laryngeal massage are perhaps the most effectual.

In fortunate cases the return to the full professional use of the laryngeal muscles should be gradual.

In conclusion, let it be said that this paper is simply a small contribution to the literature of rare neuropathic affections which would seem to have almost escaped recognition. If it serve to excite an interest in their more complete study, its object will have been accomplished.

II. MATERIA MEDICA AND THERAPEUTICS.

Coffee an Anaphrodisiac.

In the United States of North America, where strong coffee is largely used, DUPUY observed in his practice a great number of cases in which men otherwise quite healthy complained of impotence, or at least incomplete erection. The patients drank on an average 4 or 5 glasses of strong coffee. When the coffee was discontinued their difficulties disappeared, and with the renewal of its use they returned.—*Memorabilien—Am. Practitioner and News*, July 23, 1887.

Upon a Combination of Antiseptic Solutions.

LÉPINE recommends the employment of a mixture of different antiseptic solutions in quantities that, taken singly, would not act as antiseptics. For example a solution with a percentage of corrosive sublimate, 1–1,000,000; salicylic acid, 1–10,000; carbolic acid, 1–10,000; benzoic acid, 1–500,000; chlorate of potash, 1–5,000,000; bromide of quinine, 1–20,000; chloroform, 1–20,000, preserved the same volume of soup free from bacilli, and destroyed the bacillus subtilis, which offers strong resistance to antiseptics. Unfortunately no control experiments with gelatin plates were conducted.—*Deutsche Medizinal-Zeitung.*

A Convenient Formula for Oil of Wintergreen.

Much difficulty has been reported in finding an eligible mixture containing oil of wintergreen, so valuable in acute rheumatism, and also employed in other affections. The following may be commended:

℞. Olei gaultheriæ . . . . . ♏clx.
Mucilag. acaciæ . . . . . f℥ij.
Glycerini,
Aquæ . . . . . āā f℥j.
M.—Sig. ' Dose, one to two teaspoonfuls, as may be required.

—*Med. News*, July 30, 1887.

Therapeutics of Asthma.

LAZARUS, of Berlin, is quoted as follows by the *Journal of Laryngology* for May, 1887:

1. The prophplaxis of bronchial asthma requires a report of the hereditary and constitutional conditions present, and especially of the condition of the mucous membrane of the nose and throat.

2. The asthmatic attack must be suppressed as soon as possible. The best medicament for this purpose is iodide of potassium and chloral. In special cases operative treatment of the nose and naso-pharynx is recommended.

3. The treatment of the secondary affections is the more important in that they may become causes of recurrence of the asthma. For these conditions the best treatment is the pneumatic chamber. In chronic catarrhal conditions of the bronchi the best treatment is turpentine and iodide of potassium.—*Med. News*, July 30, 1887.

Dermatitis Acuta Produced by Impure Lanoline.

Dr. G. MEYER (*Deutsche Med. Wochensch.* No. 19, 1887) says one must use a good article of lanoline, else the patient may have an artificial inflammation of the skin produced. The writer's case demonstrates this. A man with swollen testicle was given an iodide of potassium ointment made with lanoline to apply. After making four applications an enormous swelling of the scrotum and penis took place. Upon using a pure preparation the swelling disappeared, but was produced for a second time by again returning to the impure preparation. Impure woolfats contain a very dangerous and irritating substance, and their use should be guarded against.—*Journ. of Cutaneous and Genito-Uri. Dis.*, September, 1887.

Naphthol in the Treatment of Enuresis.

Dr. S. J. WRIGHT, of Tallmadge, O., writes: "I had a case of enuresis, without cystitis or calculus or any pain, occurring in a neurotic lady thirty-four years old. The condition had existed since childhood. No relief had been found in local or general treatment. She had been obliged to rise many times every night for years. The quantity of urine passed each time was small, the total amount for twenty-four hours being about three pints. A nervous cough had lasted a year in spite of treatment, and, fearing bacterial infection, I gave her a No. 2 capsule filled with naphthol, also using the drug in the form of a spray. The enuresis rapidly subsided during this treatment, although no change was visible in the appearance of the urine. A temporary cessation of the naphthol for a few days was promptly followed by a return of the enuresis, which again left on resuming the drug. She is now free from enuresis, and can sleep better than ever before. Her throat gives her no pain, her cough is nearly gone, and she can omit naphthol without a return of her enuresis."—*Med. Record*, July 30, 1887.

What Salt of Quinia shall be Used Hypodermatically?

As regards *quinine*, the question appears to be settled, for the time being at least, in favor of the *hydrochlorate*. At the last meeting of the Paris Society of Pharmacy (April 6th), the merits of the rival claimants, the sulpho-vinate and the lactate, were discussed and summarily disposed of. The *sulphovinate* has the disadvantage of decomposing when kept, and thereby becoming apt to cause abscesses when injected; the *lactate* of being but little soluble when crystallized, so that the solutions have to be made extemporaneously from freshly precipitated quinine and lactic acid, with some precautions to insure the percentage of active principle. On the contrary, the hydrochlorate is a stable compound, sufficiently soluble, and easily procured from dealers in well-defined crystals, much less liable to adulteration than the ordinary medicinal sulphate. The reason of this comparative purity may be that the sulphate is an old acquaintance of the dealers, in fact, too familiar to them, while the hydrochlorate is a new-comer. But it is un-

necessary to borrow trouble; suffice it to say for the present that this salt appears to be the most eligible quinine compound for hypodermatic uses, and that it is in the actual state of science, found in commerce unadulterated with other cinchona alkaloids.—*Medical News*, July 30, 1887.

Upon the Sequel of Poisoning by Ergot Upon the Central Nervous System.

The cases mentioned in this paper were recorded before (*Jahrb.* cxciv., p. 278, cxcvi., p. 73), but the author has made some later investigations which show that while injuries continually arise through the poisoning, yet the disease is in no way progressive. Of the twenty-nine treated in the Marburg institution, nine have died, some in the institution, some before, and some after their dismissal. The cause of death was convulsions, the mental condition being profoundly disturbed. Of the survivors, TUCZEK found that in fifteen, relapses, especially of convulsions, very frequently occurred. Two patients suffered still from epilepsy. Most of them showed defective intelligence. Only three were to be noted as mentally sound, and these three were also the only ones in whom the knee-jerk had returned. Many complained of headache and parasthesias. Paralysis, ataxia, anæsthesia, changes in the pupils were not present.—Tuczek, *Schmidt's Jahrb.*, June, 1887.

Eserine in the Treatment of Chorea and Other Diseases With Excessive Motility.

RIESS (*Bul. klin. Woch.*, xxiv., 22, 1887,) has followed the recommendation of Bonchut and others in using eserine in chorea in 40 cases (6 adults). Four cases were of the severe fatal form, four were adults with chronic chorea. In the former the remedy was of no more avail than the usual ones, but in the latter there was an improvement. All the other cases were cured with remarkable rapidity, as shown by the four histories given by R. in the original.

Although under ordinary treatment the disease lasted 51.4 days, the cases under eserine lasted only 33.1 days.

R. has used eserine in five cases of tetanus, but does not declare it to have been beneficial. Much more evident was the value of the remedy in cases of *tremor* of various origin, e. g., 4 cases of senile tremor, 4 alcoholic, 2 hysterical, 1 following typhoid, 1 in case of tumor cerebri, in paralysis agitans (evident improvement in four cases), in multiple sclerosis (2 cases), and post-hemiplegic chorea (3 cases).

Riess used Merck's eserine sulphate hypodermically, injecting $\frac{1}{10}$ gr. in fresh solution once or twice daily. In some cases vomiting was caused, but usually only in the first days.—*Schmidt's Jahrbücher*, No. 215.

On the Therapeutics of Acute Coryza.

In the *Allgemeine Medicinische Central-Zeitung* of July 6, 1887, Dr. Fritsche, of Berlin, reports as follows: For three years, in nearly two hundred cases of acute coryza of different intensity, with and without fever, as well as in the typical form, showing itself with catarrhal fever, he has used, and with continued more or less brilliant success, salicylic acid, wrapped up in wafers. He gives

it in doses of three to four grains, according to the intensity of the case, every two or three hours; and in addition employs the following:

℞. Acid. acetic. glacial.
Acid carbolic, āā . . . . . ʒss.
Mist ol. balsam. . . . . ʒij.
Tr. moschi . . . . . ʒj.
M.

Twenty drops of this are poured upon cotton contained in a wide-mouthed bottle, and the patient is directed to inhale it every half hour in the beginning of the attack, and later at longer intervals, drawing it up each nostril alternately, for ten minntes at a time. The author believes that the acetic acid exerts a constringing action upon the swollen mucous membrane, and explains its action thus: That the acid, through an irritation exerted upon the ethmoidal and trigeminal nerves, produces, by reflex action, contraction of the smooth muscular fibres surrounding the erectile tissue of the mucous membrane, and hence exercises a depleting influence upon the mucous membrane. As a matter of fact, according to the writer, milder grades of coryza are found to disappear under the use of the snuff alone in an hour. The balsam is an agreeable adjuvant. Salicylic acid acts best in the first three days after the outbreak of the coryza. After the first doses even, the headache, which is often severe, and the sneezing disappear; later the dull, heavy feeling in the head vanishes, the most enormous secretion presently decreases, fever subsides, and the patient returns to his normal condition. The treatment should be continued for three or four days, however, after the remission of the symptoms, as otherwise a relapse occurs. Moreover, during the first two days it is well to avoid eating solid food, fatty foods, and dark heavy meat. Salicylic acid is least apt to disturb digestion and cause heart-burn, as the author found in his own case, when taken from one to two hours after meals. If the symptoms of swelling in the nose at the commencement of the coryza are very marked, the author believes that an insufflation of equal parts cocaine and alum bring about a remission of the symptom in the first day. By the time this remission occurs, the salicylic acid will already have developed its anti-catarrhal action. From corresponding does of sodium salicylate the author has seen considerably less, sometimes no results.

Alcohol as Poison.

Sir ANDREW CLARK, physician in ordinary to her Majesty, and Mr. Gladstone's medical adviser, writes:

"I call perfect health the loveliest thing in this world. Now alcohol, even in small doses, will take the bloom off, and injure the perfection of loveliness of health, both mental and moral.

I do not desire to make out a strong case; I desire to make out a true case. I am speaking solemnly and carefully in the presence of truth, and I tell you I am considerably within the mark when I say to you that going the round of my hospital wards to-day, seven out of every ten there owed their ill health to alcohol. Now what does that mean? That out of every hundred patients whom I have charge of at the London Hospital, seventy of them owe their ill health to alcohol

—to the abuse! I do not say these seventy per cent. were drunkards, but to the excessive use of alcohol.

I am not saying, because I have no means of saying, in human life, in society at large, what is the percentage of victims which alcohol seizes upon as its rightful prey. I do not know, I have no method of coming accurately to the conclusion, but I know this, that not only has a large percentage of such diseases as I have mentioned, but a great mass—certainly more than three-fourths of the disorders in what we call the "fashionable life"—arise from the use of this very drug of which I am now speaking.

Now, if you think of that, and think for one moment of the fact that I have told you, that in this London Hospital seven out of ten of those whom I have to-day seen, and seen for one reason, to present the statement to you to-night, lie there maimed for life by this agent; that a great mass, perhaps the greater mass of the disorders, as distinct from the diseases with which mankind is afflicted, arise from the abuse of this drug, surely, surely you will agree with me that a terrible responsibility lies upon those who, forgetful of these plain and certain teachings which the commonest experience can yield, will stimulate people to keep themselves up with glasses of wine and glasses of beer.

And, I ask, what are you to think of those who are born of drunkards, who come into this world, so to speak, with a curse not only upon them, but in them, the terrible desire for that which is to blast them, and blast them speedily—a desire which no human power can save them from, and which God alone in His wisdom and mercy, can protect them from? What an awful thought this is! Can there be any man present who, if he is taking more than he ought to take, is indifferent to all this? How can we think without dread of this terrible fact, for fact it is, as surely as that two and two make four, that this desire is becoming part of his nature, and that he is handing it down, not for good, but for the most terrible evil that man can suffer, unto generations yet unborn. Can I say to you any words stronger than these of the terrible effects of the abuse of alcohol?"—*English Newspaper.*

Salicylates in Neuralgia.

Dr. Francis X. Dercum read a paper before the Philadelphia Neurological Society on a case of tic douloureux of twelve years' standing treated by large doses of the salicylates with marked success. A married lady, aged 52 years, a German by birth, of good physique, and the mother of a number of healthy children, had suffered for this length of time from nearly continuous tic douloureux which had commenced suddenly and gradually increased in intensity. Previous to the onset she had had no illness whatever; she had not as yet entered upon the menopause, and all her functions as far as could be ascertained had been normal. She herself attributed her affection to an attack of cold. The paroxysms had varied both in frequency and severity. Occasionally they occurred many times a minute, and again but four or five times an hour. When their intensity was at its height, she felt frightful darting pains, which culminated in a sensation of her face being "rent to pieces," or "as though it were bursting from an explosion." When the pains were comparatively mild, they were simply shooting or darting in character. She was always worse in cold, damp, or stormy

weather, and suffered much less when the weather was mild and clear. The nerve-distribution most affected was that of the superior maxillary, although the inferior maxillary was also decidedly involved. The cheek, especially about the infra-orbital and malar regions, was excessively hyperæsthetic. The same was true, though to a less extent, of the gums on the affected side, from which the bulk of the teeth had been fruitlessly removed. Further questioning elicited the all-important statement that during the entire period of twelve years she had but one complete remission—in the course of an attack of severe rheumatism which affected mainly the lower extremities. The attack lasted upwards of eight weeks, and during all of this time she had been free from her tic douloureux. As soon, however, as the rheumatism subsided, her tic had reappeared, and had continued with varying degrees of intensity up to the present time. The patient now presented no evidence of constitutional trouble. Her general health was good; there was no symptom of specific disease; no affection of the kidneys. As the history suggested a doubtful connection of rheumatism with the trouble, it was decided, before attempting the operation of nerve-stretching, to test this question, and oil of gaultheria in fifteen-minim doses was ordered to be taken every three hours. In four days the patient was decidedly better; the paroxysms were far less frequent and much less painful; the hyperæsthesia of the cheek and gums had also altogether disappeared. The physiological action of the salicylate was evidenced by decided tinnitus. After a passing attack of diarrhœa, during which the use of the oil was abandoned, and a fresh chill, the tic returned. Dr. Dercum now replaced the oil of gaultheria by salicylate of sodium, twenty grains every four hours. Every trace of tic douloureux then disappeared. The patient voluntarily increased the dose of the salicylate to thirty grains, thus taking one hundred and twenty grains a day. Although these large doses caused marked depression with excessive tinnitus, deafness, and weakness of the pulse, and although she had not the slightest return of pain at any time, the patient persisted in the use of the salicylate for seventeen days, when it was finally abandoned. From that time she has been repeatedly exposed to bad weather without any return of tic douloureux. Dr. Dercum believes that the cessation of the pain was directly due to the action of the salicylates. The effect was too sudden and striking to be attributed to other causes. He believes also that the good effects of the drug were due to the large doses employed. The *mode* of action of the salicylates in this case is a matter of speculation. It is possible that the affection was rheumatic, and that the salicylates were efficient on this account. On the other hand, it is not impossible that the remedy acted in another and entirely different way; that the salicylate deadened the hyperæsthesia and annulled the pain by virtue of the same property by which it produces deafness.—*Philadelphia Med. Times*, April 16, 1887, p. 471.

Experiences With Balsam of Cannabis Indica.

In the *Allgemeine Med. Central Zeitung*, for June 11, 1887, GRAEFFNER reviews a paper by Denzel, and writes as follows: As Buchwald, of Breslau, in two single doses of one-tenth of a grain cannabin noticed severe intoxication, and therefore advised caution in the employment of it, so also Denzel, both from his own experience with balsam of cannabis indica and from Seifert's, (published in *Mün-*

chener med. Wochenschr., xxxiii, 20) advises care in the use of the latter preparation. In two recorded cases, Graeffner employed the lowest of Denzel's doses, $\frac{1}{16}$ grain, and had within two hours to deal with the most pronounced signs of poisoning. In the first case, a woman twenty-three years old, who, half an hour after the reception of the medicine, that is to say, about ten o'clock in the evening, went to bed, and immediately fell into a dreamy condition of the most horrible character. She had a sense of danger of a threatening kind, and was neither able to flee nor call for assistance. Soon also there was a nameless agony of being taken for dead and being buried alive; and finally, the very same sensation that Buchwald's patient described—that she was following her own death from phase to phase. Suddenly the patient regained mastery over her limbs, sprang out of bed, ran toward the kitchen, uttering such piercing shrieks that the domestics, in fear of an attack by robbers, barred the door between them and their mistress, and would not open it until assistance was brought from another floor. The patient assured the physician, who saw her when she had been brought back to bed, that she had become crazy. He found her in great bodily excitement, incessantly rolling to and fro, and moving her fingers, which now sought something upon the bed, now seemed to point to imaginary bystanders. At the same time she kept up a constant flow of thought which partook of the character of monologue. Nevertheless the patient was conscious of the efforts made by the physician in her behalf, conducted herself properly, and was very docile with reference to the physician's directions. The pupils were moderately dilated and inactive, pulse quickened and compressible, axillary temperature 37.9° C. Treatment consisted in administration of stimulants and application of cold compresses to the head. In half an hour the patient sank into a sound sleep, which was not very refreshing, but was free from nightmare. Next morning, at eight o'clock, she felt very faint, but still she was free from bodily trouble. Three hours later, however, a return of the symptoms of excitement of last night was noticed, though in a considerably modified degree, the depression ending in grave collapse. Stimulating treatment caused this to vanish after two hours. It is noteworthy that in this case a feeling of anxiety with slight hallucinations in the evening, and especially about bed time, continued for two months.

The second case of poisoning occurred in a man forty years old, who, after taking the medicine, lay down upon a sofa for half an hour at noon, soon fell asleep, but was awakened after an hour by a customer with the demand to write a receipt. He found it impossible to complete a stroke of the pen. Half astonished and half angry at this, he went to work, but finding a mist before his eyes, was constrained to go home. Then he fell into a condition which closely resembled death, but yet a state in which he heard everything that was spoken in the room, but was unable to make any motion, even so much as to express a wish for medical assistance. This patient was much better next day, having improved under stimulants.

In an article upon the untrustworthiness of Cannabis Indica, Dr. Schuschny (*Medizinal-Zeitung*, June 16, 1887) records a case in which, after taking $3\frac{3}{4}$ grs. of the drug for spasm of the bladder, the patient, a woman, twenty-two years old, became very anxious. Although there was no dyspnœa, the patient had to have the window of a large room opened. She sent for Schuschny

and told him that she had been poisoned from the medicine having been too strong. At that time she was dizzy; the pulse thready, one hundred and thirty-two, and almost uncountable; marked perspiration, dilated pupils, and undisturbed consciousness. The heart and lungs were healthy. Administration of black coffee was followed by improvement, the attack lasting eight hours.

The Therapeutical Value of the more recent Additions to the Genito-Urinary Pharmacopœia.

In a lecture by Mr. E. Hurry Fenwick before the students of St. Peter's Hospital for Urinary Diseases, in London, he began his observations by referring to the changes which had been introduced or had forced their way into our therapeutical practice of late years, and pointed out how much more had been done abroad in this direction than could be boasted of in this country, although here in England we were in some respects exceptionally well situated for the acquirement of new materials to work upon, and for the means of experimental study. He would not detain them, he said, by any lengthened description of the properties of those drugs of which specimens were on the table, as such descriptions had been published elsewhere and were probably familiar to most of those present. His present object was rather to encourage students to think, experiment and record for themselves, as he wished to bring before them prominently some of the properties of a few comparatively new drugs which had not hitherto been published, or had received less attention than they merited. We give a brief account of the more novel portion of Mr. Fenwick's observations:

Coca.—The lecturer succinctly narrated the properties, so long known throughout South America, possessed by the leaves of the erythroxylon coca, the isolation of its active principle cocaine, and especially the discovery by Koller of its now well-known power of producing local anæsthesia, which is one of the most distinctive characteristics of the alkaloid just named. The enormous, and in some senses hitherto unsuspected, value of cocaine in diseases of the bladder and generative organs, as well as for the relief of headache, and neuralgia of the fifth pair of nerves which both quinine and gelsemium seemed powerless to touch, was especially impressed upon the students by the clinical records of various cases treated under the lecturer's personal observation. A 20 per cent. solution of the hydrochlorate was the form generally preferred. Amongst the cases mentioned in illustration was that of a man who came to him almost doubled up with pain, having just passed a small stone, and being apprehensive of the presence of another. Mr. Fenwick was enabled to give immediate relief by merely injecting into the urethra a few minims of the cocaine solution, when the pains "ceased almost as if by magic," and the man went on his way rejoicing.

Kola.—The great importance of kola paste as a mild stimulant in cases of depressed vital force was illustrated by various cases.

Salix Nigra.—Mr. Fenwick has found that the tincture, administered pretty frequently in 5 m. doses, is of the utmost value in the treatment of gonorrhœa, gleet, etc., the character of the discharge speedily altering and the burning sensation passing off more rapidly than with any other mode of treatment.

Kava Kava.—In urethritis, cystitis, and gonorrhœa, better results, are obtained with the kava extract than with either cubebs, copaiba, or sandal wood oil, and the new remedy is pleasanter to take.

Strophanthus.—After giving a short account of Professor Fraser's researches, the lecturer proceeded to show that strophanthus is not only a cardiac stimulant and diuretic in the senses hitherto understood, but that it is capable of saving life in cases of collapse after operation for cystitis, etc. Cases were cited in illustration.

Pinus Sylvestris.—With this, in the form of a thick extract of a strong consistence, the lecturer had effected cures in many cases of gonorrhœa where copaiba was found to be incapable of producing the slightest beneficial effect.

Lycopodium.—The lecturer states that for enuresis, whether suddenly developed as the result of accident or operation, or in cases where the incontinence of urine had been of several years' standing, he was acquainted with no drug which gave such entirely satisfactory results as the tincture of white lycopodium. He had first employed it to check the nocturnal enuresis of children, but finding it so surprisingly successful, he next employed it for adults, with the result that micturition was quickly reduced from six or eight times an hour to once in two hours. He regretted that the drug was so expensive at present. Next in efficacy to the tincture he placed the preparation of the white powder, but warned his hearers that the yellow or brownish-yellow kinds of lycopodium in the market were, for this purpose, practically useless and inert. The lecture was illustrated with specimens, experiments, and the recorded data of cases, and were noteworthy as marking a distinct innovation in the annals of the British schools of medicine. —*Journ. of Cutaneous and Genito-Ur. Dis.*, Sept., 1887.

Value of Urethran as a Hypnotic.

Dr. J. B. Andrews, of Buffalo, reports the following valuable experimental clinical conclusions:

"The first experiment was made on the 8th of May, when I took thirty grains of urethran at three p m. Before taking, the pulse stood at eighty; in fifteen minutes it had fallen to seventy; and at forty minutes was substantially the same. I fell asleep while sitting in my chair about half an hour after taking the medicine. The sleep was natural, without any unpleasant sensations, without disturbance of respiration or the pupil of the eye. It was not prolonged, but was interrupted by the taking of a sphygmographic trace. After this interruption no further opportunity was given for sleep, as I got up and walked about.

"On May 14, a second experiment was made. I took fifty grains of urethran at 8:25 p. m. The pulse before taking stood at eighty-eight; in fifteen minutes the pulse was reduced to eighty-two, and in an hour after taking, to eighty. At nine o'clock, thirty-five minutes after taking the drug, I fell asleep. At 9:20 tracing was taken; at 8:25 I was awakened by a report from the night-watch regarding patients which demanded my attention. This aroused me so fully that I did not sleep again. The character of the sleep and the effects of the drug were the same as before reported.

"On May 27, the third experiment was made. I took sixty grains of urethran at ten minutes past nine p. m. Pulse before taking stood at eighty-six; in ten minutes it had fallen to eighty-four, in forty minutes to seventy-two, and in fifty minutes to seventy. A tracing was taken ten minutes after taking the medicine, another forty minutes after, and another fifty minutes after. At 9:35, twenty

minutes after taking the medicine, I fell asleep. At 9:45 sleep was profound, respiration seventeen. At 10 p. m., I still slept, respiration sixteen. After this I was awakened, and though feeling profoundly sleepy, I did not yield further to the sensation. Retired at eleven o'clock and slept soundly all night, as usual.

"In all these experiments the sleep seemed to be of a strictly physiological character. Its approach was normal, and on awakening there was no headache nor any other feeling than that of having been aroused from pleasant sleep. There was no subsequent disturbance of the stomach of any kind, and, in fact, nothing to distinguish it from a pleasant period of repose.

"The drug was taken simply dissolved in water, and no attempt was made to cover it. The taste is not unpleasant, resembling in a mild degree that of spirits of nitre.

"For administration it can readily be covered by any of the ordinary excipients. In regard to the tracings taken, I was unable to make out any marked effect upon the character of the pulse, except a reduction in the number of the beats: hence these are not presented.

"On analyzing cases of which notes were taken, we find that there were nine of women and nine of men. Divided as to forms of insanity, acute mania, six; paresis, four; melancholia, four; chronic mania, two; dementia, two.

"The dose most commonly given was thirty grains. In two instances, however, it was carried to the extent of sixty grains. This was ventured upon after my personal experience with the same dose.

"So far the results have been quite favorable, and show that urethran has marked hypnotic power. There were in no case any unpleasant results of any kind. There is nothing to indicate any further action than upon the cerebrum. The effects of the drug were felt, so far as we were able to judge, within an hour after its administration, and the sleep lasted in most cases from the time of observation, commencing at ten o'clock, until five o'clock in the morning.

"We do not consider these experiments sufficient to enable us to speak positively of the effects of the drug, or to give it its true position as a sleep-producing agent. This can be done only after it has been used a long time and in large quantities. They are, however, such as to lead us to recommend its trial in cases where other drugs are contra-indicated, either from the pathological state present, the unpleasantness of the dose, or the peculiar idiosyncrasy of the patient.

"It may do well in private practice, where there is a demand for a variety of hypnotic drugs, and I would commend it for careful consideration and further use.

"We have used in all something over five ounces of urethran. This, upon an average of thirty grains to a dose, which is probably very nearly correct, would give eighty doses as having been administered.

"Equally good results followed in cases which have not been reported as in those which are referred to in this paper."—*Weekly Med. Rev.*, July 30, 1887.

Alcohol on the Heart.

The following is an abstract of an address by Dr. B. W. RICHARDSON, delivered before the International Congress of Inebriety:

Dr. Richardson said that his observations had taught him that although the

primary action of alcohol was upon the nervous system, the first organ which bore witness to the action was the heart. This is not peculiar, because the heart is always the first witness to the fact of nervous disturbance. When the sphygmophone is applied, the mere act of the patient listening to the sounds disturbs the heart and alters the pulsation. The effect of odors and of strange sights is the same.

The distinguished Dr. Wilson Phillip showed originally, and Dr. Richardson has since confirmed it, that if the surface of the brain of an animal be simply exposed to the action of alcohol the motion of the heart is influenced, and the disturbance is so rapid that it looks as if there were a direct impression from the brain to the heart.

Dr. Richardson then demonstrated from pulse readings what were the dangers that occurred in the circulation through an acute course of alcohol leading up to complete intoxication. These changes were written from the pulse of those affected by alcohol, and they showed a deviation from the standard in every stage. After a complete intoxication up to the fourth degree, the pulse would recover its tone if it were left to gain its natural condition, but it was quite three days before the return to health was declared.

In the inebriate the heart was never allowed to declare itself naturally. Once put off the natural lines, and if continued off, then it will, in time, become so fixedly unnatural that intervals of relief from the disturbing agent extending over eighteen to thirty-six months were often required before the circulation reassumed the *rôle* of health.

To what extent the heart is disturbed in the inebriate was a point which Dr. Richardson next demonstrated from pulse readings. He showed: (1) the reading of a natural pulse; (2) the reading of a pulse of an inebriate at his best; (3) the pulse of the same man after he was what he called "elevated," or supported by a full measure of alcohol; (4) the pulse of the same man during the period of depression following upon the alcoholic indulgence.

These readings showed the continued and continuous variation and irregularity of action of the heart. Among all the stages of the life of this man, the character of the changes exhibited being as varied as his words and actions, his circulation was at the best feeble and uncertain, *watery*. Under the alcohol it was sharp and vehement, but easily depressed; under depression it was simply, as the old writers well expressed it, "rotten." It showed no regular outlines. While, then, it may be true, and no doubt is true, that alcohol acts primarily on the heart, its mode of action is through the circulation by a third movement back again upon the brain, the volition, the emotion, and the reason.

So soon as these changes, therefore, become permanent or habitual, they produce that confirmed disease and habit of body which we call inebriety, the centre of which is in the heart and circulation. At first, the heart of the inebriate is made tense and full by alcohol. This, under continuance, extends to permanent enlargement or dilatation with stretching of the valves, especially the semilunars, and distention of the arterial system throughout, leading to loss of elasticity. As a further change, there is modification of structure, both cardiac and vascular; a feeble, large heart, dilated, rigid arteries, distended and bulging veins. The corporeal mechanism is, in short, changed altogether. As an accompaniment of these changes of structure there is a change of disposition, of will, of nature.

There are many who are not, strictly speaking, accepted as inebriates, but who are really so, in a minor degree, against their own admission or belief. They are inebriates of the minor key. They tell the physician nothing more than the fact that they know and feel the "sustaining" power of alcohol. They feel, they affirm, that they cannot live without it, and when abstainers assure them that the sense of the requirements is an idea, and no more, they reject the statement as either ignorant, unsatisfactory, or even cruel. This sense of want, in fact, divides the moderately inebriate from the truly temperate. The non-sense of the want is the true sense of the danger. This fact they who do not feel the want know quite well, and they who do feel it know partly, their better judgment leading them to it as the first step towards positive inebriety. In confirmed inebriates the state of the circulation is supposed by the sufferer to be actually natural. It is strange to say, but it is correct, that the confirmed inebriate forgets what it is to be a natural man. He is in a distinct and unnatural sphere, like a man who has been cast amongst savages and made to acquire, by habit, their habits, tastes, and tongue. With the circulation so modified, the heart so feeble, the arteries so imperfect, as in the confirmed case from which the pulse reading was made, there could be nothing but uncertainty of physical and of mental manifestations.

From these reflections on the changes of the heart and circulation under inebriety, Dr. Richardson surveyed the question of treatment. Here two facts presented themselves—first, that with the heart and circulation of the pathological inebriate state there can be no rapid or immediate change—that is physically impossible; secondly, that so long as alcohol is permitted to enter the inebriate body, there can be no chance of successful restoration of the natural state.

There were, therefore, on pure physiological lines of argument, setting all sentiment on one side, only two elements of cure for the inebrate, minor or major —namely, time and total abstinence from alcohol. It is not simply that the evil spirit must be cast out; it must be kept out until the body it has perverted comes back to its own natural state, and has, so to speak, been born again.

For what may be classified as the minor forms of inebriation, two years, at least, of abstinence are necessary in the adult, fully-developed sufferer; for the major form, two to six years are necessary in order to insure a restoration from the disablement that has been developed and sustained into permanent habit or disease.

Up to this present time nothing more has been discovered as a cure for inebriety, and this discovery is of much value. But we need not suppose that science has exhausted all her other resources. In plain truth, she has but just begun to see her way. Let those practitioners of medicine who are called upon to treat the inebriate sick get into their mind's eye the exact condition of circulatory organs of those who are under their care—the large, feeble heart, the arteries, like an india rubber ring that, from long use, has lost its grip over a book or parcel of letters which it has held together, inelastic and ready at any moment to give way; the veins or rivers of life distended and unresistant—and he will fairly grasp the difficulties which lie before him from their core. Then he will be in a condition quietly to study out how this crippled state may be helped so that time for recovery may be shortened and recovery itself be made more complete.

He (Dr Richardson) had no doubt that some aid would come from this study. But one thing at a time, and the first thing was a clear and absolute definition of the physical nature of the evil that had to be met and relieved in the disease of inebriety, which, in however many forms presented, was one disease with variety of phenomena, dependent on a common causation and a common cause.—*The Quarterly Journal of Inebriety*, July, 1887.

On the Remedies used by the Caffres to Prevent Blood Poisoning from Anthrax.

Dr. PAUL RITCHIE read the following paper before the Medico-Chirurgical Society of Edinburgh, May 4th, 1887: It is now upwards of three years since my friend Mr. Frederick Wienand, of Bellevue, Bedford, Cape Colony, forwarded to me the two specimens of plants I submit to the Society, but various circumstances delayed my making use of them. The *first* was the difficulty I experienced in getting the plants identified. The *second*, my unsuccessful efforts to learn further particulars regarding their use, or that of other plants or remedies for a similar purpose in other parts of South Africa. None of the books I happened to look into afforded me any information. Mr. H. M. Stanley, the African traveller, with whom I communicated when he was last in Edinburgh, could throw no light upon the suuject, and to Mr. Joseph Thomson it was also unknown. During the time the Forestry Exhibition was open in this city, I tried to learn if the representatives at the South African Court could give me information or indentify the plants, but I was again disappointed. Nor was I more successful in my application to the officials at the Botanic Gardens, nor amongst the practical horticulturalists with whom I was acquainted. I then took counsel with a friend in London, who, although himself a good botanist, preferred to submit the specimens at the Botanical Department of the British Museum. In doing so, he unfortunately said they were from South America, and after much unnecessary searching, the report was they could not find any plant with which they could associate them. Determined not to be left in this very unsatisfactory position, application was again made, and the correct source of the specimens given, and I was ultimately successful in getting them identified.

Since I succeeded in obtaining the names of the plants, I have endeavored to learn if there was any record of the use of plants by the natives for the like purpose, but I have failed to find any reference. Amongst British natives with whom I have spoken, probably from their having come from other parts of the country, and possibly from their not having been engaged in farming, there was knowledge neither of the disease nor of its prevention. The veterinary surgeons in this city, from whom I made inquiry, knew nothing of the use of drugs for the purpose, and there is only one authority I know of (from whose book I shall shortly quote), who mentions the eating of the flesh of cattle affected with splenic fever or anthrax. At this stage of the inqiury a new difficulty occurred. On questioning two fleshers engaged at the slaughter-house here in slaughtering and dressing animals, after describing the pathological appearances in cattle dying of splenic fever or anthrax, they said they were quite familiar with them, but they

called the disease and knew it amongst themselves as the "black spauld or spaud," and that they had often eaten the flesh of animals dying from it and dressed by themselves. Black spauld being a Scottish term for "quarter ill," or "emphysema infectiosum," did not occur in the books on veterinary medicine I was able to consult, and it is only lately, through the kindness of Principals Williams and Walley, that I have learned full particulars regarding it, and satisfied myself of the distinguishing characteristics between anthrax and "black spauld." From the observations of the practical fleshers I have referred to, I have a fear that animals suffering from anthrax have not only been slaughtered, but that the flesh has also been eaten. On this point, however, Principal Walley informs me "the Edinburgh fleshers know nothing of anthrax. It is most dangerous in every way. We have no proof that quarter ill is ever transmitted to man, and the sound parts of a carcase are used as human food with impunity; the infected fluids do not even kill cattle if introduced directly into the blood." I think it right to state that I am informed by the authorities at the slaughter-house, that the flesh of cattle affected with quarter ill is condemned, and that the carcase affected with anthrax is destroyed by fire.

My conversation with the fleshers has also delayed me in submitting the specimens to the Society; for, if these men have killed, dressed, and eaten anthrax animals with impunity, and without the previous use of an antidotal remedy, then possibly the South African Caffres might do the same.

The recent allusions to anthrax in the House of Commons, and the ignorance regarding it as shown by the occurrence of cases in Cheshire, in "repeated outbreaks," make this a suitable time to bring the subject before you.

When Mr. Wienand visited me, in course of conversation the subject of splenic apoplexy came up. He stated that it was very common in some parts of South Africa, especially so in his neighborhood, and caused the rapid death of many oxen. He also alleged that the native Caffres feasted to gorging on the carcases, after a certain form of protecting themselves from the virus had been gone through. Mr. W. promised on his return to Cape Colony to try and obtain specimens of the plants the natives used, and to send them to me. The quantity sent was, however, too small for experiment had the opportunity offered, at least until the specimens had been authenticated.

The following are Mr. Wienand's observations accompanying the specimens. He writes from Bedford, Cape Colony:

"By a friend I send you two different herbs, which the natives use in cases of blood poisoning from animals that die from splenic affections. I have obtained them at great trouble and expense, as the natives are very loth to give information on these subjects, and their cure is really a marvelous one. The two are to be kept separately, each being a distinct cure in itself. The one without the yellow flower (*Teucrium Capense*) is a good antidote for snake-bites as well.

"The herbs are bruised when green, for they are always to be had, and infused in cold water, of which copious draughts are taken. To my knowledge, it has never been tried to cure cattle; there is no time for it. An apparently healthy animal drops down dead and is shunned by everybody, and if dogs feed on it they also die; but if a *native specialist* is come-at-ible he is sent for; a throng in the meantime approaches the carcase, and the doctor administers a draught to

each individual, after which the animal is skinned, boiled, and devoured amidst great rejoicings. Blood poisoning only occurs when in ignorance such an animal is skinned or the meat handled."

The plants which I now show belong to different Natural Orders—the one to the Labiatæ, said by Mr. Wienand to be also a good antidote for snake-bites, has been identified at the British Museum as the *Teucrium Capense* (Thunberg); the other is a Composite plant, named by the same authority as the *Matricaria vigellæfolia*, D. C. Before receiving this information, it seemed to me to have the characters of an Artemisia, but these two genera are not very remote.

Of our British species of Matricaria, two at least are recognised to have pharmaceutic properties, namely, the *Matricaria Parthenium*, the feverfew, and the *Matricaria Chamomilla*, the wild chamomile, which is sometimes substituted for the *Anthemis nobilis* in the preparation of oil of chamomile.

Of the Labiate plant, the Teucrium, as possessing medicinal properties, there is no great record. The best known British species, the *Teucrium Scorodonia*, the wood sage, and *T. Chamædrys*, have aromatic and bitter tonic properties.

Regarding the properties of the plants I show, nothing is known at the British Museum Botanical Department.

The points I desire to direct attention to in Mr. Wienand's statement are—

1st. That until protected by the infusion of the herbs, the natives shun the carcase of the anthrax-affected animal.

2d. If dogs feed on the raw flesh they die.

3d. The blood poisoning occurs only when in ignorance such an animal is skinned or the meat handled without precautions.

4th. But after copious draughts of the infusions in cold water have been taken, the carcase is approached with freedom, and skinned and cut up.

5th. That after being boiled it is devoured with great rejoicings.

6th. That my correspondent is not aware of the diseased animals being dosed with the drugs during life, because there is no time for it.

Upon these points the following observations occur to me, but I premise them by this statement regarding the transmitter of the information.

Mr. Wienand is a native of Cape Colony. He is an extensive land-owner, and possesses a large amount of stock in cattle, sheep, and ostriches. He is a very intelligent man, not likely to be readily misled in his judgment, his mind being enlarged by travel, and he has, moreover, a thorough knowledge of the native Caffres. The information he supplies is likely to be reliable, therefore. As evidence of his intelligence and stock-rearing ability, it may be added that in one year (1883), at the Agricultural Exhibition, he "was very successful, taking 17 prizes, 14 of which were first-class for stock, heading the list of competitors by a long way."

Of the danger attending contact with the dead animal the natives are well aware. That this is great, the statement that unprotected men and dogs are affected proves that it is so. Dogs eating the uncooked flesh die. It is important to note this, for if the operator on the dead animal is protected by draughts of the infusions, he can cut up the animal apparently with impunity. It is upon this statement that the evidence of protection depends, for after the animal is

cut up *and cooked*, we know from home evidence the meat may be eaten without injurious result.

The fact that the treatment has not been applied to the diseased animal does not, it seems to me, have much bearing on the present inquiry. If there had been evidence that after administration the animal survived, the proof would not have been great, for it might be alleged, readily and feasibly, that the animal had not suffered from splenic fever or anthrax. This evidence would be therefore of doubtful import.

The real point of importance is that without protection there is great danger, and after taking the remedy there is apparently none.

Cooking the flesh of an anthrax-affected animal destroys the vitality of its bacillus. Once it is in the pot, the meat may be eaten after cooking with impunity. This I learned from the fleshers; and since my attention has been directed to the subject, my friend Mr. Alex. Inglis M'Callum, V.S., favored me with the perusal of the excellent work by Principal William Robertson, Professor of Hippopathology in the Royal Veterinary College, London, *A Text-Book of the Practice of Equine Medicine*, 1883. He gives a full and excellent account of anthrax, its history, literature, geographical distribution, and pathology.

I quote the following from his book (page 183) as to the introduction of the disease by ingestion: "Deductions derived from experiment and the behavior of the bacillus anthracis in relation to artificially produced disease, compel us to subscribe to the theory of its being communicable by the alimentary tract, the air-passages, or by cutaneous inoculation, and, though generally fixed, the virus may be more rarely volatile. That it is transmissible, is now beyond dispute." He further remarks: "To the condition of receptivity of the species and individual we are inclined to attach the utmost importance, and from our observation we are led to look to this for much explanation as to the apparently erratic behavior of the anthrax virus."

After referring to the effects of temperature on the vitality of the filaments and spores, he states at page 195, "I have myself partaken daily for some days of roasted beef from an ox killed because affected with splenic fever, without unpleasant results." "Boiling for two minutes entirely destroys rods and spores in all conditions—fresh or old, dry or moist;" and at page 198 his fifth deduction is "that the boiling point is fatal to the spores and rods."

The mere fact that these Caffres can eat and enjoy one of their voracious meals, after cooking the flesh of an anthrax animal, is of small importance after learning Mr. Robertson's personal and experimental experience; but I submit a case for further inquiry as to the effect of protective means have been made out. Although we do not in this country recognize any special therapeutic quality in the indigenous species of Matricaria and Teucrium, still it may be kept in remembrance that, in addition to their stomachic and tonic properties, chamomiles, though inferior to many other medicines, in the words of Pareira, "as a remedy for intermittents . . . have gained considerable celebrity."

I should not wish to be understood as advocating the use of the flesh of anthrax-infected cattle. My intention has been to raise inquiry as to the protective means to be used by those who unfortunately have to handle the diseased carcases and hides; and the subject is one to which the attention of the Colonial

office should be called, so that in conjunction with the authorities at the Cape, full inquiry may be made in the districts where this protective means is used.

Before I resume my seat, may I add this deduction, although not strictly connected with the subject of my paper, that heat is the best destroyer, not only of the rods, but of the germs of the anthrax bacillus. Experience recorded so far back as the year 1873 (in the *Veterinarian* for December), has also proved the danger which may follow the burying of these diseased animals if in such a position that the water-drainage can affect the pond from which the animals on a farm receive their water supply. We now know the explanation of this, yet it is remarkable that with fourteen years' interval burying is still permitted, and explanations sought for the prevalence of the disease! Boiling or cremation are undoubtedly, to my mind, the best methods of disposing of the diseased carcase. Whichever is practicable ought to be employed.—*Edin. Med. Journ.*, August, 1887.

*The Classification of American Mineral Waters.**

Possibly a more correct title for my paper would be "The Classification of the Mineral Waters of the United States," but if the scheme holds good for our mineral waters, there is no reason why it should not apply to all mineral waters, whether Asiatic, European, or American.

For the last three years I have collected the statistics of the production of the mineral waters of the United States, for publication in the volumes on the mineral resources of the United States, published annually by the Geological Survey.

In the course of this work I have compiled the analysis of nearly 800 of our mineral waters. These analyses, with lists of the springs and other data relating to them, have been tabulated and published in Bulletin 32 of the U. S. Geological Survey.

It occurred to me that in this material might be found the data for a more complete classification of American mineral waters than has yet been made; and with this idea in view, I have attempted a scheme of classification which seems to me at once simpler, more logical, and better adapted to the conditions presented than most of those previously outlined.

I take it that there is no necessity to advocate the desirability of some systematic arrangement of our mineral waters. It lies at the very foundation of our study of the subject, no matter what may be our point of view. Any classification will be to a certain extent arbitrary, for many of the waters shade into each other in respect to their ingredients, and the question is, what kind of a classification shall we adopt? It may be made from a geographic, a geologic, a therapeutic or a chemic standpoint.

The latter two of course are the ones of particular interest to the medical practitioner.

A therapeutic classification of our mineral waters is out of the question at present, and probably will be for a long time, as there are few, if any, of the springs whose waters have been so thoroughly studied in a clinical way that we have intelligent and accurate knowledge of their effects upon correctly diognosti-

* Read before the American Climatological Society, Baltimore, June 1, 1887, by A. C. Peale, M. D., of the U. S. Geological Survey.

cated diseases. We are therefore reduced to a chemical classification based upon the predominance of one or more of the ingredients.

In the absence of complete therapeutic data we can rely with a reasonable degree of certainty upon the chemical composition, and may expect certain effects from the probable combinations indicated by the analysis, especially as we have the benefit of experience derived from the study of well-known springs in Europe, where the subject has been accorded a prominence which it will no doubt have eventually in this country. Before that day arrives, our spring owners as a class will have to be more willing to subject themselves to scientific restrictions, and the people who use the water will have to learn to regard the watering places as something more than merely places of recreation. We certainly have many valuable springs which need only development to have attention called to their therapeutic importance.

This is not the place, nor have I the time, to treat of the historical aspect of the subject. It will be found detailed in any treatise on the subject of mineral waters. I simply give one of the oldest classifications for the sake of comparison. Pliny divided water as follows: Nitrous, Aluminous, Bituminous, Salt, Sulphurous, Acidulous, Martial or ferruginous, Salubrious, Poisonous; such as boil pulse slowly, such as incrust the vessels in which they are placed, such as intoxicate, etc.

The numerous schemes found in the books of to-day do not differ materially from this classification of Pliny. The majority of them can be reduced to the following list—some containing all, others only a part: Indifferent, or chemically indifferent; Acidulous, or carbonated; Alkaline, calcic, or calcareous; Saline, purgative, or aperient saline; Chalybeate, sulphurous, or sulphuretted; and Thermal.

The classification made by Walton, in his "Mineral Springs of the United States and Canada," is given below with the German and French systems.

WALTON'S CLASSIFICATION.

I. Alkaline waters.	1. Pure. 2. Acidulous (Carbonic acid.) 3. Muriated (Chloride of sodium.)
II. Saline waters (Chloride of sodium).	1. Pure. 2. Alkaline. 3. Iodo-bromated.
III. Sulphur waters.	1. Alkaline. 2. Saline. (Chloride of sodium.) 3. Calcic.
IV. Chalybeate waters.	1. Pure. 2. Alkaline. 3. Saline. (Chloride of sodium.) 4. Calcic. 5. Aluminous.
V. Purgative waters	1. Epsom salt. (Sulphate of magnesia.) 2. Glauber salt. (Sulphate of soda.) 3. Alkaline.
VI. Calcic waters.	1. Limestone. (Carbonate of lime.) 2. Gypsum. (Sulphate of lime.)
VII. Thermal waters.	1. Pure. 2. Alkaline. 3. Saline. (Chloride of sodium.) 4. Sulphur. 5. Calcic.

GERMAN CLASSIFICATION.

I. Alkaline	1. Simple carbonated. 2. Alkaline. 3. Alkali and common salt.
II. Glauber salt.	
III. Iron	1. Pure. 2. Alkaline and saline. 3. Earthy and saline.
IV. Common salt	1. Simple. 2. Concentrated. 3. With bromine and iodine.
V. Epsom salt.	
VI. Sulphur.	
VII. Earthy and calcareous.	
VIII. Indifferent.	

FRENCH CLASSIFICATION.

Sulphur waters	With salts of sodium. With salts of lime.
Chloride of sodium waters	Simple. With bicarbonates. Sulphuretted.
Bicarbonated waters	Bicarbonate of soda. Bicarbonate of lime. Mixed bicarbonates.
Sulphated waters	Sulphate of soda. Sulphate of lime. Sulphate of magnesia. Mixed sulphates.
Ferruginous waters	Bicarbonated. Sulphated. With salts of manganese.

My first objection to Walton's scheme holds against many others, viz., that it is a mixture; he combines three systems in one. The term thermal is based on a physical sensation, purgative refers to a therapeutic action, and the other terms are based on chemical composition. Again, in all three of these classifications, even so far as a chemical system is followed, the terms are based on properties that are not analagous.

The terms denoting the presence of gaseous constituents are made equivalent to those based on the character of the solid constituents. Sulphur waters are those characterized by the presence of sulphuretted hydrogen gas. Carbonated or bicarbonated waters are so named from the presence of free carbonic acid gas, while the terms alkaline and saline refer to the presence of certain solid constituents. In the German classification, under the head of common salt waters, we find a division corresponding in part to the amount of sodium chloride contained in them, a difference in degree which can be shown just as well by arranging the waters according to the amount of salt held in solution, beginning with the weakest. This brings me to the scheme of classification which I wish to present here.

In the first place, all waters are characterized by their temperature. They are cold, tepid, warm, or hot. I therefore divide them into two great groups—non-thermal and thermal. I do not here use the term thermal as applying to springs whose temperature is above the mean annual temperature of the place in which they are located, but include under the designation those which have a temperature of 70° F. or more. A thermal spring may belong to any one of the classes

or divisions which are based on the predominating solid constituents. The fact that a spring is thermal depends upon its geologic position. Warm and hot springs are found in regions of volcanic rocks, in connection with faulted or dislocated strata, in areas of mountain corrugation, or where borings have been made to great depths below the surface. It has frequently been stated that thermal springs are less highly mineralized than others, but I find no facts to sustain this statement. They are less numerous, but there appears to be no reason why they may not duplicate non-thermal springs in every particular except temperature. I next divide each group of waters into four classes, viz., alkaline, alkaline-saline, saline, acid.

In the first place, I have not included the term indifferent or chemically-indifferent. The question as to whether a water should be called indifferent or not, is one upon which it would be difficult to secure a unanimous opinion. The spring owner would perhaps draw his line at one place, the physician who prescribes the water might draw it at another, and the chemist at still a third place. I therefore arrange the analyses in order, according to the proportion of the classifying ingredient, beginning with the least highly mineralized water under each division, and I prefer that the lines of indifference be drawn by those especially interested. Pure water is a product of the chemical laboratory alone.

In the second place, there are no chalybeates placed on a line with the alkaline or with the saline springs. Of course all iron waters are tonic in their effects, but they may differ widely in other properties. When we compare the various analyses of chalybeate springs, we find that those in which the iron exists as a carbonate, contain also carbonates of the alkalies or alkaline earths. Others contain iron sulphates with various other sulphates, or they may be characterized by chlorides. Others again have free acid with the saline constituents.

The chalybeates, therefore, it seems to me, should be divisions of the alkaline, alkaline-saline, saline, and acid classes, and here I have placed them in my scheme. The fact that they all contain iron should not relegate them to one class, especially when their effects are widely different. I do not think we can ignore the other ingredients.

Almost the same remarks hold good for the sulphur springs, that I have made in regard to the chalybeate springs.

Sulphur springs are those in which free sulphuretted hydrogen exists, that is, they have a gaseous constituent. A very little sulphuretted hydrogen will go a great way in classifying a spring, but I see no more reason why we should disregard the solid constituents here, than in the case of the chalybeates. Even the chalybeates may be sulphuretted, and in fact any division of the four classes that I have outlined may contain the same gaseous constituent. The waters are therefore characterized finally according to the gas they contain. They may be non-gaseous, carbonated, sulphuretted, carburetted, or azotized (that is, with nitrogen gas). It may be objected that the sulphur springs are separated, but if necessary the scheme can be reversed and the gaseous character indicated first. If this is done, the alkaline, saline, and acid springs must be separated.

The plan I have adopted appears to me to be more compact. It is preferable to keep all the alkaline waters together, all the saline waters together, etc., particularly as the analyses are not nearly so complete with reference to the gaseous

constituents, as to the solid constituents. Many waters lose the gases long before the water is analyzed in the laboratory.

It is possible that many of the non-gaseous springs of my lists may have to be transferred to the other divisions when we have more complete analytical data.

There is a fashion in mineral waters as in most other things. Sulpho-carbonated waters promise to come to the front in the near future, and at the present time lithia waters occupy a prominent place. I know of but one lithia water, however, in which the analysis shows enough lithia proportionally, to entitle it to a distinct and separate place on my scheme of classification: that one is from the Londonderry Lithia Spring of New Hampshire, which is said to contain over 13 grains of lithium bicarbonate, out of 30 grains of solids to the gallon. In the others the amount is proportionately small, and very frequently consists only of traces, so that the springs are classified by some other ingredient. However, the fact that the water contains lithia, even if only a trace, will probably be impressed in the name given to the spring. In making these remarks, of course I say nothing as to the efficacy or non-efficacy of even the traces in some of the springs. It is not my province here either to deny or affirm. What is true of the lithia waters is true of many others in which certain ingredients exist in small quantities—ingredients which are supposed to be particularly efficacious in certain diseases. In no scheme of classification can we take account of all the minor constituents. It is impossible to express all the shades of difference, and in the examination of the analysis with a view to the use of the water a process of exclusion or elimination will have to be followed in order to get at the water just suited to the peculiar conditions presented.

Returning now to the scheme I have outlined: my first class is alkaline. This name has been so long and universally used to include those waters that contain the alkaline carbonates, that I have retained it. I include under it all waters characterized by carbonates, whether of the alkalies, alkaline earths, the alkaline metals, or even iron alone. As I have already said, the carbonate of iron is usually associated with alkaline carbonates.

The alkaline waters as I have thus designated them, are divided primarily into five great divisions, viz.; sodic, potassic, calcic, magnesic, and chalybeate, in which the carbonates of sodium, potassium, calcium, magnesium and iron, respectively predominate. I have also separated those springs in which there is a combination of calcic-chalybeate, sodic-magnesic, etc. Now each of these divisions may be non-gaseous, carbonated, sulphuretted, etc., or there may be a combination of two or more of the gases, as sulpho-carbonated, etc. Some few springs contain a large quantity of free nitrogen gas. These I have designated as azotized. In others the predominating gas is carburetted hydrogen, that is, they are carburetted. For those springs characterized by free carbonic acid gas, I have used the term carbonated instead of acidulous, in order to avoid confusion when considering the acid springs. We find that there are carbonated acid sulphated springs, *i. e.*, springs with free sulphuric acid, sulphates, and free carbonic acid gas, and to call these springs acidulous acid springs, would be, to say the least, somewhat awkward.

Nearly one-half of the alkaline springs are calcic-alkaline, that is, with calcium carbonate, or bicarbonate, predominating. The calcic-chalybeate springs come

next in number. I cannot enumerate all the alkaline springs here, but simply say that I have separated them according to the scheme I have outlined. Under the head of calcic-alkaline a great many of our well-known springs fall, such as the Waukesha springs of Wisconsin, the Poland spring and Auburn spring of Maine, the Gettysburg spring of Pennsylvania, etc. Under calcic-chalybeate we find some of the Bedford springs of Pennsyluania, and some of the springs near Crab Orchard, and other localities in Kentucky, and the iron spring at Richfield springs, New York.

The next class I make includes the alkaline-saline springs, viz.: those in which there is a mixture of carbonates with sulphates or with chlorides. I divide it, therefore, into two divisions, sulphated and muriated, according to the predominance of either set of salts, and secondly, sub-divide these exactly as I did the alkaline springs, according to the base, into the sodic, potassic, magnesic, chalybeate, etc. Each one of these sub-divisions may also be non-gaseous, carbonated, or sulphuretted, etc.

The most prominent springs under the head of alkaline-saline are the Saratoga springs, which I place under the head of carbonated sodic-muriated alkaline-saline springs, *i. e.*, they contain free carbonic acid gas, and have sodium chloride predominating, and contain also alkaline carbonates. The Clarendon springs of Vermont are also alkaline-saline, being carbonated calcic magnesic. Of course the sodic muriated springs are the most numerous in this class. The third class —saline springs—is divided exactly as are the alkaline-saline springs. The salines out-number the alkaline-salines in the proportion of three to one, and are nearly one-third more numerous than the alkaline springs. Almost all of the springs usually classed under the head of purgative or aperient saline will fall under the head of sulphated salines in my scheme. Thus a sodic-sulphated water and a magnesic sulphated water would not be mistaken for anything else than purgative waters. Among other waters of this division are the well-known Crab Orchard and Harrodsburg springs of Kentucky, Anderson spring of Bedford springs, Pennsylvania, the Midland Well of Michigan, and Alburgh springs of Vermont.

About one-quarter of the sulphated salines are calcic. Possibly in arraying these waters the proportions of the other sulphates ought also be given, as the calcic sulphate is supposed to be inert, medicinally. Sharon Springs, New York, have been placed under the head of sulphuretted calcic-magnesic sulphated waters. Some of the Richfield springs belong here also. Possibly they should be called sulpho-carbonated, although the sulphuretted hydrogen largely predominates. Under the chalybeate-sulphated springs a large number of the alum springs fall. Those with free sulphuric acid, however, belong to the next class. Of the muriated saline springs nearly 88 per cent. are sodic-muriated, that is, with common salt as the principal constituent. Of course all brines fall under this head.

The fourth and last class I have named acid, a class that has been neglected in most schemes of classification. Here under the sulphated acid division I place those waters characterized by the presence of free sulphuric acid, and sulphates. They include the sour springs found at three localities in Texas, the Oak Orchard acid springs of New York, the Blossburg springs of Penna., the Iowa acid springs, and most of the alum springs of Virginia and Kentucky.

The muriated acid springs are those characterized by the presence of free hydrochloric acid, in connection with chlorides. So far as the analyses show, we have no springs of this division within the limits of the U. S. A number of such springs are found in the New Zealand Geyser regions, and further investigation may disclose their existence in our own geyser region, the Yellowstone National Park.

In the National Park we have most of the springs of my next division of acid springs, viz.: the silicious springs, in which silicic acid is present in considerable proportion. They are nearly all thermal. During the past few years Dr. Gooch, lately appointed Professor of Chemistry at Yale College, has been working on a series of analyses of the Yellowstone Park waters. With the assistance of Mr. J. E. Whitfield in the Laboratory of the Geological Survey, about forty analyses have been completed, which will be of great interest to geologists, chemists, and physicians. They are of remarkable complexity. All the waters contain arsenic in quite an appreciable quantity. These analyses have not been published, but when they are we will have the data for the more complete subdivision of the silicious springs, which are in greater number in the Park than anywhere else in the country, and possibly they exceed those of any other geyser region in the world. In conclusion let me say that I think any spring that may hereafter be analyzed can be fitted into a place in the scheme I have outlined, and that the designation of a water in accordance with it, gives one, be he physician or layman, at once a definite and clear idea of its general composition. Under this scheme I have arranged between 600 and 700 waters according to the actual proportions of the classifying ingredients, and expect finally to arrange them according to percentages.

SCHEME OF CLASSIFICATION.

	Group A. Non-thermal.	*Group B. Thermal.*
Class I.	Alkaline.	
Class II.	Alkaline-saline	1. Sulphated. 2. Muriated.
Class III.	Saline	1. Sulphated. 2. Muriated.
Class IV.	Acid	1. Sulphated. 2. Muriated. 3. Silicious. (a. Sulphated. b. Muriated.)

	Non-Thermal.	*Thermal.*
I. Alkaline.	Sodic	**Non-gaseous. Carbonated. Sulphuretted. Sulpho-carbonated.**
	Lithic	*Carbonated.*
	Potassic	*Non-gaseous. Sulphuretted.*
	Sodic-potassic	*Carbonated.*
	Calcic	**Non-gaseous. Carbonated. Sulphuretted.** *Sulpho-carbonated. Carbonated-azotized.* Azotized.
	Sodic-calcic	**Carbonated.** *Sulphuretted.*

	Non-Thermal.	*Thermal.*
I. Alkaline.	Calcic-magnesic	**Non-gaseous.** **Carbonated.** *Sulphuretted.* *Sulpho-azotised.*
	Magnesic	*Non-gaseous.* *Carbonated.* *Sulphuretted.*
	Chalybeate	*Non-gaseous.* *Carbonated.* *Sulphuretted.* *Sulpho-carbonated.*
	Sodic-chalybeate	*Carbonated.* *Sulphuretted.* *Sulpho-carbonated.*
	Calcic-chalybeate	**Non-gaseous.** *Carbonated.* *Sulpho-carbonated.* Sulphuretted.
	Magnesic-chalybeate	*Carbonated.* *Sulpho-carbonated.*

		Non-Thermal.	*Non-Thermal.*
II. Alkaline-saline.	1. Sulphated.	Sodic	Non-gaseous. *Carbonated.* Sulphuretted.
		Calcic	**Non-gaseous.** *Carbonated.* **Sulphuretted.** *Sulpho carbonated.*
		Calcic-sodic	*Non-gaseous.* *Carbonated.* *Sulphuretted.*
		Sodic-magnesic	Non-gaseous. *Sulpho-carbonated.*
		Calcic-magnesic	*Carbonated.* *Sulpho-carbonated.* *Carburetted.*
		Calcic-chalybeate	*Carbonated.*
	2. Muriated.	Sodic	**Non-gaseous.** **Carbonated.** Sulphuretted. *Sulpho-carbonated.*
		Calcic	*Non-gaseous.* *Sulphuretted.*
		Sodic-calcic	*Non-gaseous.* *Carbonated.*
		Sodic-magnesic	*Carbonated.*
		Calcic-magnesic	*Carbonated.*
		Sodic-chalybeate	*Non-gaseous.*

	Non-Thermal	*Thermal.*
III. Saline.—1. Sulphated.	Sodic	**Non-gaseous.** **Carbonated.** **Sulphuretted.** *Sulpho-carbonated.*
	Potassic	*Non-gaseous.*
	Potassic-sodic	*Sulphuretted.*
	Calcic	**Non-gaseous.** **Carbonated.** **Sulphuretted.** *Sulpho-carbonated.*
	Sodic-calcic	*Non-gaseous.* *Sulphuretted.* *Sulpho-carbonated.*
	Sodic-calcic magnesic	*Sulphuretted.* *Sulpho-carbonated.*

			Non-Thermal.	*Thermal.*
III. Saline.	1. Sulphated.		Magnesic	*Non-gaseous.*
				Carbonated.
				Sulphuretted.
				Sulpho-carbonated.
			Sodic-magnesic	*Non-gaseous.*
				Carbonated.
			Calcic-magnesic	*Non gaseous.*
				Carbonated.
				Sulphuretted.
				Sulpho-carbonated.
				Carbonated-azotized.
			Alumino-magnesic	*Non-gaseous.*
			Chalybeate	*Non-gaseous.*
				Carbonated.
				Sulphuretted.
			Sodic-chalybeate	*Carbonated.*
				Sulphuretted.
			Potassic-chalybeate	*Carbonated.*
			Calcic-chalybeate	*Non-gaseous.*
				Carbonated.
				Sulphuretted.
				Sulpho-carbonated.
				Carbonated-azotized.
			Alumino-chalybeate	*Carbonated.*
			Calcic-alumino-chalybeate	*Non-gaseous.*
			Magnesic chalybeate	*Non-gaseous.*
				Carbonated.
			Calcic-magnesic-chalybeate	*Non-gaseous.*
			Calcic-magnesic-alumino-chalybeate	*Non-gaseous.*
			Magnesic-sodic-chalybeate	*Non-gaseous.*
	2. Muriated.		Sodic	**Non-gaseous.**
				Carbonated.
				Sulphuretted.
				Sulpho-carbonated.
				Carburetted.
				Carbonated azotized.
			Calcic	*Non-gaseous.*
			Calcic-sodic	**Non-gaseous.**
			Sodic-magnesic	**Non-gaseous.**
			Calcic-magnesic	*Non-gaseous.*
			Sodic-calcic-magnesic	*Carbonated.*
				Sulphuretted.
			Chalybeate	*Non-gaseous.*
			Calcic-chalybeate	*Carbonated.*
			Sodic-chalybeate	Non-gaseous.
			Sodic-magnesic-chalybeate	*Non-gaseous.*

			Non-Thermal.	*Thermal.*
IV. Acid.	1. Sulphated.		Calcic-chalybeate	*Non-gaseous.*
			Alumino-chalybeate	*Non-gaseous.*
				Carbonated.
				Sulphuretted.
				Sulpho-carbonated.
			Alumino-magnesic-chalybeate	*Carbonated.*
			Calcic-alumino-chalybeate	*Non-gaseous.*
			Calcic-magnesic-chalybeate	*Non-gaseous.*
			Calcic-alumino-magnesic-chalybeate	*Non-gaseous.*
	2. Muriated.			
	3. Silicious.	*a.* Sulphated.	Sodic	Non-gaseous.
		b. Muriated.	Sodic	Non-gaseous.

In the scheme as outlined above, the divisions that have representatives among the non-thermal springs are printed in *Italics;* those that have thermal springs referable to them in Roman letters; and where both are represented a **black faced** letter is used.

Case of Visions much Benefited by Sodium Hypophosphite.

Dr. F. A. BURRALL, of New York, reports the following case in the *Med. Rec.*, July 30, 1887: My patient is an American widow lady, aged ninety-three, whose general health is in a remarkable state of preservation, who is not addicted to opium or alcohol, and from whom Dr. Roosa skilfully removed a cataract in December, 1885. Previous to the operation she had been annoyed by visions of gayly-dressed young women and ill-favored men who came to her room at night. A stimulant gave her some relief. After the operation the figures persisted in their visits, and caused much annoyance. About the beginning of the present year my attention was especially called to her, as her mind was so much disturbed by the presence of these nightly visitors that it was feared lest it might become necessary to place her in an institution for the treatment of nervous diseases. Her nocturnal guests were not composed of "such stuff as dreams are made of." My patient did not, as would a dreamer, regard these figures as imaginary when remembered on the following morning. To her they were real, and she would express surprise that such persons should be allowed to enter a respectable house and invade domestic privacy. One or two dark men and from three to twenty young dark women would come to my patient's room and remain nightly until near morning. The men would sit and look at her, and the young women, clad in light, handsome dresses, and with gay caps and bonnets, would talk in a low tone, and smile, and hang wet flowers over her pictures or doors, lie upon her bed, and try to pass from her room into the one behind it; they were not rude, but would not leave the apartment when ordered to do so. My patient was annoyed not only by this violation of her privacy, but also felt shocked at the unhealthfulness consequent on the presence of so many persons in her room at night. Life was becoming almost intolerable. Stimulants had been administered by a friend, but the effect was unsatisfactory. On the theory that there was a defective cerebral nutrition, which might be benefited by the exhibition of phosphorus, I began the administration of sodium hypophosphite, in doses of ten grains, to be given a short time before retiring. The improvement was so immediate that I cannot regard it as a mere coincidence, since the apparitions had been long and constant in their attendance. It was singular to observe that there was a kind of method shown in the manner in which the visions disappeared. Those which had been present at first, were coarse and would not go when ordered away; those which remained after the use of the medicine, were less disagreeable, and my patient told me on January 25th that the previous night there was only one little woman, who was coming down the curtain, but she told her to go away and she obeyed; one man was also there.

By March 16th my patient was experiencing only slight annoyance from the apparitions, but in April her nervous system became somewhat disturbed by the excitement consequent upon a visit of a real relative. The medicine had been discontinued for some time. There had also been considerable constipation, and this seemed to prove a cause of nervous excitement. Her sleep was again disordered; the medicine was again resumed, and once more speedy improvement followed.

At the present time my patient's condition remains remarkably better than when she first began the hypophosphites. She still has an occasional uncanny guest, but such visitors have been robbed of their power. She treats the subject of visions with comparative indifference.

III. GENERAL CLINICAL MEDICINE.

Spermaceti and Soap a Substitute for Cod Liver Oil.

Senator considers spermaceti and sodium soaps a substitute for cod liver oil, one too, that has no bad taste, and is not incompatible with stomachic digestion. Spermaceti in its finely powdered state, pure or with oil sugar and citrate of oleosaccharum, can be given in pretty large doses, as much as twenty grammes and more. Soaps have with reference to fats somewhat the same significance that peptones bear to white of egg. They are given as pills, medicated soap with some mucilage forming a good pill mass; but are best given as keratinized pills —*Schmidt's Jahrb*, June, 1887.

Cancrum Oris.

Woronichin of St. Petersburg publishes the result of his experience of 77 years with Noma (*Jahrb. f. Kinderhkde*, xxvi. 2, p. 161, 1887.) During the time named W. has seen 22 hospital and 24 out-patients. According to his statistics noma appears most frequently among weakly or sick children of the poorest classes, usually at the end of infectious diseases. Among these measles was most common, and, in decreasing frequency, scarlet fever, whooping-cough, pneumonia and typhoid. Girls were affected oftener than boys. The third year of life showed most cases, but the first showed one case and from that until the 6th it was quite frequent. After the sixth year it was seldom met with. The right side of the face was affected oftener than the left, both sides in one case only. Most cases occurred from December to May. The majority of the cases ended fatally, only three of the house cases recovering. Treatment was ineffectual. One case was extremely chronic, ending with necrosis of most of the lower jaw only after 45 days' illness.—*Schmidt's Jahrbücher*, No. 215.

A Means of Facilitating Catheterization in Women.

Dr. G. H. Kemp, of Barnesville, O., reports the following case: "Mrs. B. B——, aged twenty-six, primipara, of delicate habit and nervous temperament, gave birth to a child after a protracted and rather severe labor. A couple of days later the patient complained of retention of urine, and examination showed her to be suffering from considerable local irritation and feverishness, with symptoms of pelvic cellulitis. In the course of a few minutes a catheter was introduced and the patient relieved of the urinary difficulty. The next evening the patient was found to be again suffering from retention of the urine. The vagina, urethra, and neighboring parts were now swollen and very irritable—in fact, so much so that it was found impossible to introduce the catheter. While reflecting on what to do next, it occurred to me to use cocaine. A small compress was saturated with a four per cent. solution and appplied to the irritable parts. In the course of half an hour another attempt was made to introduce the catheter,

which proved successful. The effect of the cocaine in allaying the tenderness and pain was so decided that the patient complained scarcely at all while the instrument was being used."—*N. Y. Med. Rec.*, July 30, 1887.

Going to Bed Late.

The ancient English proverb, "Early to bed, and early to rise," and the corresponding French one, "Rising at six, eating at ten, eating at six, and going to bed at ten, makes a man live ten times ten," is in danger of receiving a mortal blow from a German doctor, who, unwilling to accept as a fact this axiom of the wisdom of nations, has gathered numerous data relative to the habits of those who have attained to an advanced age. He finds that in the majority of cases the persons who have lived the longest have been those who habitually went to bed late.

The doctor has determined that, in every group of ten persons who had attained the age of forty-five years and over, eight or less had habitually not gone to bed before one or two o'clock in the morning. The doctor is of opinion that to rise early tends oftener to diminish than to increase vital energy, and so abridges life. He asserts that it is altogether an error to think that morning hours are the most strengthening. He considers them, on the contrary, the most fit to produce fatigue, and that morning air is more dangerous to certain constitutions than evening air.—*L' Union Médicale du Canada*, July, 1887.

A Case of Measles which Arose from Accidental Inoculation, with Especial Participation of the Right Arm.

A school teacher opened a small pustule upon the back part of the right middle finger of a girl seven years and a half old, and in doing it, used a pin borrowed from a neighboring child sick with measles. J. Michael, of Hamburg, who reports the case, says that nine days afterwards the girl sickened in the usual manner, and the next day—the tenth day after inoculation—a spreading eruption of measles made its appearance. The exanthem developed itself with especial severity upon the right arm, where a broad streak was formed, extending from the middle finger to the shoulder, and composed of separate spots closely set together. This streak decidedly could not be viewed as an expression of lymphangitis, and disappeared with the rest of the eruption, the course of the whole being altogether of the usual benign character. As to the diagnosis, measles could not be doubted, as a younger sister of the patient, in the very next week afterwards, sickened with a typical attack of measles. The case agrees throughout with the experiences which have been had with regard to intentional inoculation of measles in health.—*Schmidt's Jahrb.*, June, 1887.

Employment of Clysters of Hot Water in Different Affections, and Especially in Dysentery.

The therapeutic applications of hot water as an astringent, first used in gynecology, have been much extended. Dr. Raymond Tripier (*Société des Sciences Médicales de Lyons*), has experimented with them with success in lead colic, and in vesical or rectal tenesums of tabes, in which they induced complete cessation of the pain, but the result was especially happy in dysentery. In this disease

the water should be injected at a temperature of 110°–120° F., and a large quantity used—300–500 cc. in an infant, one litre in an adult. If the patient retains the clyster, a mitigation of the pain is immediately established, a diminution followed by a disappearence of the blood from the stools, and finally a diminution in the frequency of the stools themselves. Often these injections are alone sufficient to effect cure; nevertheless, in grave cases, Tripier has given at the same time, decoction of ipecacuanha. Among other observations, the author notes that of child twenty-one months old, who had had stools every 15 or 20 minutes, and who, from the first clyster, remained two hours without going to the water closet, then three hours, and so on, finally getting well soon.—*L'Union Médicale du Canada*, July, 1877.

An Entire Family Attacked Simultaneously with Demonomania.

Lapointe says this family consisted of the father (a tenant farmer), the mother, three sons, and two daughters. With the exception of one son, who was a soldier, all of them were engaged in the work of the farm, and were naturally simple, credulous, and of feeble intelligence. In 1882 they became possessed of the same deluded ideas; they believed themselves poisoned by sorcerers and that the devil was in their clothes; they had hallucinations of sight (they saw the devil incessantly, and sombre-colored animals), of smell (sulphurous and mephitic fumes), and hearing (imaginary murmurings and door-knockings). Their mental derangement necessitated confinement in the asylum, where they remained for a period of a little under a month. They continued after their discharge in a satisfactory way till 1884, when first the mother became unsettled, accusing imaginary enemies of giving them all over to sorcerers and the devil; then the other members shortly afterwards became affected, and all six were again admitted to the asylum, suffering from a form of mental disorder almost identically similar to that which existed on their first admission. After a residence of 5 months they were sufficiently recovered to return to their home.—*Glasgow Med. Journal*, August, 1887.

The Treatment of Pulmonary Phthisis by Lard with Milk.

Dr. N. Akimenko, of Professor V. G. Lashkevitch's clinic, in Kharkov, writes that, having many a time heard of excellent services obtained by the Russian peasantry from treating various wasting chest diseases by the internal use of lard with milk, he resolved at last to give a fair trial to that popular remedy in several cases of early pulmonary phthisis. In all the cases the affection was diagnosticated on the ground of Koch's microbe being present in the patient's sputa. The method was practised in the following way: he took the fat from the omentum and mesenterium of a recently-killed pig, soaked it for twenty-four hours in cold water, then picked out all connective tissue, and boiled from a quarter to a third of a pound of the fat with three glassfuls of unskimmed milk on a slow fire, for three or four hours, until about two glassfuls of fluid were obtained. The latter was then strained through a piece of muslin, and cooled down to be administered (after duly shaking) to the patient, the dose being at first one-quarter or half a glassful three times a day: but by the end of a second week as many as three

glassfuls a day. The results obtained were these: (1) The patients' weight invariably increased (in one of the cases the patient gained nine and a half pounds in thirty-three days). (2) Cough and expectoration were alleviated, while the quantity of sputum considerably lessened. (3) The appetite always improved. Such patients in whom the loss of appetite had formerly amounted to a complete aversion from meat, after the treatment of two or three weeks' duration, requested me to allow them an additional meat-dish. (4) The patients took the lard emulsions with pleasure; no digestive disturbances were ever observed. Pointing to his results, Dr. Akimenko recommends his professional brethren to try the lard treatment in phthisis, especially in such cases where cod-liver oil cannot be employed on account of its "verily disgusting taste," or in consequence of its causing gastric disturbances.—*Provincial Med. Journal*, June 1, 1887.

Remarks on the Treatment of Ileus caused by Acute Obstruction of the Intestine.

CURSCHMANN (*Deutsche Med. Wochenschr.*, xiii. 21, 22, 1887,) recommends two procedures in acute obstruction of the bowels as being the least heroic and dangerous. They are puncture of the distended loops of intestine by means of a hollow needle, and inflation through the rectum.

The object and method of the puncture are known. It causes an equilibrium in the volumes of the intestinal masses on either side of the obstruction, and lessens the tension of the abdominal walls, two circumstances that can well assist in the spontaneous disappearance of the obstruction. Puncture is best performed with a needle no thicker than that of a hypodermic syringe, the end of which is fastened to a rubber tube. The other end of the tube lies in a bottle of salicylic acid solution in a basin containing the same solution. With such an apparatus the volume of gas removed can be easily measured. The point for puncture must be carefully selected. The effect is best in those cases in which an obstruction of the small intestine is probable.

Curschmann has performed this operation in 10 cases, with no disadvantage in any case. In three cases the results were brilliant. Two cases recovered at once after the operation; in the third, after two punctures the intestine was made passable, but the patient (70 years old) died with symptoms of heart-weakness.

Curschmann has seen similar results from the inflations, and these seem indicated when the obstruction is in the large intestine. They are much less dangerous, and much easier to give, than large injections of water, and give much less trouble to the patient. The patient lying on the back, a Nélaton catheter is introduced as far as possible, and with a simple spray-bulb air is pumped in. In two cases the method had the best results, and in a third (chronic obstruction from cancer of ascending colon) it was possible to restore the lumen repeatedly.

In answer to the objection made that in a case of obstruction where puncture was performed intestinal contents were found in the abdominal cavity, Curschmann replied that such a result might follow if the loop punctured had been so long distended as to lose its contractility.—*Schmidt's Jahrbücher*, No. 215.

A Case of Malignant Endocarditis Simulating Intermittent Fever.

Dr. ANDREW H. SMITH, Professor of Clinical Medicine and Therapeutics in the New York Post-Graduate Medical School, Physician to the Presbyterian Hospital, reports the following case: "Henry R——, aged twenty, clerk, called on me, January 27, 1887, complaining of gastric trouble and palpitation of the heart, both of which he attributed to excessive smoking. A careful examination of the heart showed only increased force and frequency of the beat. There was no murmur, and no hypertrophy. The same day, after returning home, he had a severe chill, followed by fever and sweating, for which he took quinine. On the 31st the chill was repeated, and on February 1st I was called in. I learned that since some time in the autumn he had been spending nearly every evening in a malarious district near Hoboken, returning late at night to the city. Also, that he was in the habit of smoking cigarettes in great excess. The violent cardiac action still continued, and I found the spleen somewhat enlarged. I ascribed the chills and the enlarged spleen to the effect of malaria, to which there had been ample exposure, and accounted for the cardiac disturbance as due to nicotine-poisoning in a very neurotic subject, and probably made more active by association with the malarial intoxication. A few days, however, showed this view to be incorrect, as the paroxysms observed no regularity in their recurrence, sometimes being absent for two or three days, and then, again, being repeated at intervals of only a few hours. Moreover, they were entirely uninfluenced by the most liberal use of quinine, arsenic, and Warburg's tincture. During the intervals the temperature was sometimes slightly elevated, sometimes subnormal. Urine not albuminous. As the case progressed the chills were accompanied by vomiting, and followed by extreme depression. The sweating was very profuse. The cardiac disturbance became more violent, and at last a systolic murmur was developed at the apex. This was very soft when first detected, but in a few hours became loud and harsh. The febrile paroxysms grew more marked, the temperature reaching 105°. Diarrhœa with tympanites supervened. No spots were found at any time upon the surface. The strength failed very rapidly, coma supervened, and in the last few hours of life inspiration was embarrassed in a way that suggested laryngeal paresis from cerebral embolism. Death took place within thirty-six hours after the development of the cardiac murmur, the entire duration of the illness being twenty-nine days. An autopsy was not permitted." —*Med. Rec.*, July 30, 1887.

Cause and Cure of a Certain Form of Backache.

Sir JAMES SAWYER writes as follows in the *Lancet*, January 1, 1887: Early in the year 1881, in a note which was published in a weekly professional journal, I asked the attention of my brethren to a form of backache which had not, so far I know, been described before. I desire now to refer to this subject again, and to record that my further experience in practice has confirmed my previous remarks upon the point in question.

Subjective symptoms are always important diagnostic signs, and they are often clear therapeutic indications. Amongst such sensations backache is frequently a leading symptom, and also one which is pressingly dwelt upon by patients.

Of backache there are divers forms. Dr. George Johnson, in an able clinical lecture, and Mr. William Squire, in a practical memorandum, have drawn the attention of the profession to many of these. But they have not mentioned a variety of backache in which the cause of the pain is traceable to the condition of the large bowel. I find that some patients complain of a pain, aching, dull, and heavy in character, and extending "right across the back." When asked to point out its position, they indicate this by carrying a hand behind the trunk and drawing the extended thumb straight across the back, in a transverse line, about half-way between the inferior angles of the scapulæ and the renal region. This pain I venture to attribute to a loaded colon; I conclude I have correctly found its proximate cause in fæcal accumulation in the large intestine. I have found it disappear after the exhibition of an efficient cathartic. This form of backache is a concomitant of habitual constipation, and is especially significant of the alvine sluggishness of sedentary persons. In such a condition, as I have stated elsewhere, I find aloes, given in combination with iron, to yield the best results. We owe the valuable suggestion of combining iron with aloes, when aloes is given for laxative purposes, to the late Sir Robert Christison. He showed that the cathartic property of aloes is much increased by its combination with sulphate of iron. Dr. Neligan, Dr. Kent Spender, and Dr. David Bell have confirmed this experience. I prefer socotrine aloes, and I give of it one, two, or three grains in a pill, combined with a quarter of a grain of sulphate of iron and one grain of extract of hyoscyamus. This pill should be taken every night. We must aim at producing a full alvine evacuation after breakfast. When a saline cathartic is indicated, I usually employed the old-fashioned Rochelle salt. This "goes" well with tea, coffee, or cocoa. One or two tablespoonfuls may be taken at breakfast, dissolved in a large cupful of one of these beverages.

Winter Diarrhœa.

During the latter part of 1886 and the early part of the present year, epidemic diarrhœa appeared in several parts of London and even in districts at a distance from the city. There was a similarity of symptoms in the various epidemics that seemed to point to a community of cause—high temperature, 100.5°—101.5°, abdominal pain, vomiting, cramps in the limbs, great depression, and in a few of the cases there was hemorrhage from the bowels; most of the patients were attacked during the night. That the cause was not climatic was proved by the fact that the disease appeared in places near together, at different dates, while other neighboring localities escaped. Mr. Shirley F. Murphy (*Lancet*, May 28), who was present at one of the hospitals during an epidemic, although he was at that time unaware that the disease was prevailing in other parts of London, undertook to trace the cause. The epidemic appeared on Monday, Jan. 24. No patients were admitted or discharged on Sunday, 23d; of those discharged before that date none had diarrhœa after leaving, although six had been discharged on the morning of the 22d; of six discharged on the 24th three had diarrhœa at home. Of the admitted patients, diarrhœa occurred among those who came to hospital on the 22d, or before, but all admitted on the 24th, or after, escaped. The cause of the diarrhœa would thus appear to have been in operation after the patients left on the 22d—*i. e.*, after midday dinner on that day, until sometime

before the arrival of the patients on the 24th. The number of patients in the hospital during this time was 60, of whom 43 were attacked, 67.6%; the staff consisted of 22, of whom two (*nurses*) were attacked, 10%. The first articles examined were the water and milk, but it was found that the percentage remained the same as respected the disease whether the patient drank water only in his tea or not, or milk only in his tea, or boiled milk, or raw milk. Besides, the staff used the same water and milk as did the patients; the same could be said of meat, potatoes, etc., until, at last, the writer reached the butter, of which three qualities were supplied to the institution; one for the staff, one for the nurses and servants, and one for the patients. The latter quality is delivered every week-day at 10 a. m.; it is of a cheap grade and comes mostly from abroad, where it is manufactured on a large scale, the milk from hundreds of farms being mixed together. The attacks occurring in the two nurses, which were not as severe as those in the patients, may have been caused by their eating some of the patients' butter. The fact that all the patients did not suffer might have been due to an unequal distribution of the toxic principle in the butter, or to a smaller dose. The fact that the epidemic appeared in no less than a dozen different places, some of them widely separated, makes this subject a very interesting and important one, and worthy of further investigation.—*N. Y. Med. Abstract*, June, 1887.

A New Method of Testing the Knee-Jerk.

Dr. LOMBARD gives the following directions for testing the knee-jerk:

Let the patient lie on his side, the leg to be examined being uppermost. Place a cushion or roll of cloth between the thighs, so as to separate the knees, and, as far as possible, to fix the thigh of the limb to be studied. Support the foot of the leg to be examined by a sling formed of a loop of bandage or of a towel, suspended from a cord. Grasp the cord as far from the foot as may be, letting the hand be directly over the ankle, that the leg may swing freely and the degree of flexion of the knee be determined entirely by the tension of the muscles. Strike the ligamentum patellæ with an instrument which has a rounded edge and which is considerably heavier than the ordinary percussion hammer.

Improvements upon this method will readily suggest themselves; such as to make the thigh immovable by letting it rest in a splint which is moulded to its inner and posterior surface, and which is fastened to a firm support; to fix the foot in a suitable swing; and to let the cord from which it is suspended come from a pulley at the ceiling.

By means similar to those described, a marked "knee-kick" may often be got from a patient who by the ordinary methods of examination would exhibit little or none. The delicacy of the method depends on the fact that the muscle is relieved of the weight of the leg, and its slightest contraction can, therefore, cause a visible moment. By this means some rather curious results have been obtained. A marked "knee-kick" was observed in the case of one subject during sound sleep. The re-enforcements described by Dr. Weir Mitchell were admirably illustrated. In short, the method seems to meet all the requirements of the investigator.

The extent of the motion of the foot, and consequently of the contraction of the quadriceps muscle, may be recorded by the following simple arrangement: A

string may be fastened by one end to the heel, and by the other to a strip of elastic, which, in turn, is attached to a firm upright support. The support can then be placed in such a position that the string shall be tense, shall be horizontal, and shall form a right angle with the long axis of the leg. The writing mechanism may consist of a piece of wire, bent to form a T, the horizontal arms of which can be fastented by the string, while the free end of the stem can rest on a paper coated with lamp-black, and secured to a board, which is placed directly beneath. A contraction of the quadriceps muscle will extend the leg, stretch the elastic, and by drawing the wire across the blackened surface, leave a record of the extent of the movement. Such a tracing can readily be fixed by passing the paper through the ordinary brown shellac varnish. Crude as such a method is, it would enable valuable records to be obtained with but little trouble.—*Braithwaite's Retrospect, July, 1887.*

Some Points in Relation to the Diagnostic Significance and Therapeutic Indications of Laryngeal Symptoms resulting from Pressure of Aneurisms upon the Vagus and Recurrent Laryngeal Nerves.

DAVID NEWMAN, M. D., (*Br. Med. Jour.*,) July 2, 1887, in a very able lecture calls attention to many points indicated in the heading. He endeavors to show, First, that aneurism of the aorta and the innominate artery may exist and give rise to laryngeal symptoms only. Second, that in the early stage, pressure may cause paroxysms of most urgent dyspnoea, accompanied by laryngeal stridor and paroxysmal cough. Third, that at a later stage, paralysis usually occurs, but not always, limited to one side, and characterized by phonative waste of breath and imperfect cough, but without dyspnoea, except when reflex spasm is indicated on the opposite side, or when by pressure stenosis is caused by the aneurism. Fourth, in certain cases tracheotomy should be performed not only to prevent impending death from asphyxia, but also as a remedial measure.

After cursorily referring to the various causes of paralysis of the vagus and recurrent laryngeal nerves, the lecturer proves his thesis by the narration of four cases. He forcibly reminds us that often the laryngologist is consulted for an apparently simple throat affection, which proves to be the result of impairment of the function of the muscles supplied by the recurrent laryngeal nerve.

The first case was one of aneurism of the innominate artery and descending aorta, in which there was at first paroxysmal dyspnoea from *unilateral spasm of the right vocal cord*, followed three months after by *bilateral spasm of the adductors*, and at a more remote date by *bilateral paralysis of the adductors;* dysphagia and laryngeal symptoms were the only evidences of aneurism. The aneurism increased in size, and death took place from *direct pressure of the tumor* on the trachea.

The only symptom in the second case when first observed was dysphonia from pressure of the left recurrent laryngeal nerve, and the only other physical sign was a difference in strength and rhythm of the radial pulses; within a short interval paroxysmal tracheal dyspnoea developed, with the usual physical signs of aneurism.

In the third case there was aneurism of the descending portion of the arch of the aorta: *dyspnœa* and *dry cough without alteration in voice;* physical examination in early stage revealed only hypertrophy of left ventricle, without bruits; increase in severity of symptoms; physical evidence of aneurism; *continued dyspnœa with paroxysmal exacerbations.*

Paralysis of the left vocal cord with aphonia developed, and, on exertion, dyspnœa was the symptom observed, in the fourth case, whereupon aneurism at the bifurcation of the trachea was suspected. Under treatment by rest and potas. iodid. the symptoms were stationary and the voice improved by compensatory action of the right vocal cord. Latterly there has been obstruction to deglutition.

Dyspnœa, in aneurism, may be due to pressure on the following structures:

1. The recurrent laryngeal nerve causing *a*, unilateral spasm of the adductor muscles of the larynx, or *b*, unilateral paralysis of the abductor muscles. If both recurrent nerves are pressed upon, bilateral paralysis will follow. In the former instance paroxysmal, in the latter constant dyspnœa occurs, with exacerbations, due to temporary spasm of the adductors of the opposite side. In *a* the dyspnœa is not serious, in *b* it is grave on account of the complicating reflex spasm.

2. The vagus, causing, *a*, spasm of the adductors on both sides (reflex), or, *b*, paralysis on one side (abductor), and spasm on the other (adductor). The dyspnœa is serious and sometimes fatal.

The degree of pressure on the nerves determines the nature of the obstruction. When the pressure is slight, spasm is induced; when great, paralysis of the nerve ensues.

3. The trachea, with paroxysmal or constant dyspnœa.

4. The pulmonary plexus of nerves, which is distributed to the bronchial muscles, causing symptoms resembling spasmodic asthma.

Practically it is of great importance to determine whether the dyspnœa is due to interference with the functions of the larynx or to pressure on the trachea, for in the former event tracheotomy is demanded. The following table presents the points of distinction as well as the characteristic symptoms:

LARYNGEAL OBSTRUCTION.	TRACHEAL OBSTRUCTION.
	1. Inspiration more difficult than expiration. The latter easy, noiseless and often wavy, synchronous with the heart's impulse.
2. Head thrown backward.	2. Head in natural position or thrown forward.
3. Larynx descends during inspiration.	3. Larynx practically stationary.
4. Metallic ring associated with the stridor.	4. Whizzing or sipping noise with the stridor.
5. Voice altered or suppressed.	5. Voice weak.
6. Cough a frequent symptom, usually imperfect.	6. Cough not necessarily present, not laryngeal.

LARYNGEAL OBSTRUCTION.	TRACHEAL OBSTRUCTION.
7. Laryngeal stridor heard most distinctly over the larynx, or at the back in the middle cervical region.	7. Tracheal stridor heard at the root of the neck and over the upper dorsal spines.
8. Respiratory murmur equal on both sides.	8. Often difference in respiratory murmur of two sides.
9. Spasm or paralysis of abductors or adductors shown by laryngoscope.	9. Tumor recognized by laryngoscope when at or above bifurcation of trachea.

The following tabulation of symptoms indicates the nature and cause of the dyspnœa:

Paralysis of the abductors.

1. Dyspnœa (one or both sides), due to sucking in of the flaccid cords, or accumulation of mucus; seldom severe.
2. Dyspnœa persistent.
3. Inspiration impeded on auscultation over larynx.
4. Expiration easy.

Paralysis of abductors of one side, with temporary spasm of the adductors of the opposite side.

In addition to the above—

1. Attack paroxysmal, sudden and severe.
2. Aphonia and dysphonia not common, on account of compensatory action of other muscles.
3. Voice impure.
4. Phonation imperfect.

Paralysis of muscles of both vocal cords.

1. Severe inspiratory dyspnœa, increased by exertion or recumbent position.
2. Voice feeble, but normal.
3. Expiration free.

The all-important practical deductions the author makes, refer 1. To the recognition of the cause of the laryngeal difficulty, which is often the only symptom of intra-thoracic pressure, and also to, the danger of considering the laryngeal difficulty as the only one. 2. To the methods of treatment. A successful treatment of the aneurism is usually only possible if recognized early, and hence the great importance to the practitioner of the recognition of the association of the abnormal states. Finally the author pleads for tracheotomy in threatening laryngeal obstruction. He thinks the severe attacks of dyspnœa frequently cause rupture of the aneurism and death by hemorrhage, and hence can be prevented by stopping the dyspnœa. He strongly urges the performance of early tracheotomy. It is to be remembered that dyspnœa, by each of the causes mentioned above in turn, may occur in the evolution of an aneurism.

A Study of the Phenyl-Hydrazin Test for Sugar in Urine as Applied by Ultzmann.

Dr. A. K. Bond, of Baltimore, Md., gives the following description of this new test in the *Med. News*, August 6, 1887:

Although the determination of the presence or absence of grape sugar in urine is, as a rule, easy, yet we find now and then cases in which it is extremely diffi-

cult to decide by means of the ordinary tests whether the results which we obtain are caused by grape sugar or not.

The fermentation test and the polariscope are unreliable where the percentage of sugar is very small. The reduction tests, the best of which is that of Fehling, are reliable in all cases as *negative* tests—when no reduction is effected no sugar is present; but, as *positive* tests, they fail when the amount of sugar is very small, for, in this case, the results may be due to other reducing substances in the urine. It is with pleasure, therefore, that we read of the introduction of a test of an entirely different order, which promises to be a certain *positive* test for sugar in the urine. I refer to the phenyl-hydrazin chloride test, which was introduced by Emil Fischer,* and has been applied to the examination of pathological urine by P. Grocco,† and by R. von Jaksch.‡

In this phenyl-hydrazin chloride test the sugar itself is obtained in a crystalline compound, the formula of which is $C_{18}H_{22}N_4O_4$. This compound, which Fischer names phenyl-glukosazon, appears in the form of a yellow sediment, which, under the microscope, is seen to consist of fine yellow needles. According to Fischer, phenyl-glukosazon is not affected by watery solutions of alkalies. Suspended in warm water, it reduces alkaline copper solutions energetically. It dissolves in hot alcohol, and crystallizes out, when water is added, in the form of yellow needles. Heated to 204° C., it melts to a dark red liquid, and at a higher temperature it is decomposed. Crystals, resembling those formed by glucose, are obtained from other members of the sugar group—levulose, galactose, sorbin, milk sugar, and maltose—but I find ‖ that of these only levulose and milk sugar are ever found in the urine. Levulose is found only when dextrose is present, and milk sugar only during the course of the so-called milk fever. All observers agree that these sugars are the only substances which, under the conditions present, yield such crystals. The studies of Fischer, Grocco, and Jaksch have made this test an extremely valuable one in the hands of skilled investigators and chemists, but the addition of water to the urine interferes with the exactness of the results, and the use of the water-bath is quite unnecessary.

It is my purpose in this paper to describe a simple and rapid mode of using this test, which I learned from Professor Robert Ultzmann at his clinical lectures in Vienna, in the winter of 1885–86. I do not think that Dr. Ultzmann has yet published anything upon the subject, but the matter is of such importance that I do not hesitate to quote his words.

My notes upon his lectures are as follows: "It is a very simple test, and the most exact of all. Put into a test tube 1 cm. high of the phenyl-hydrazin chloride, and upon it 1 cm. (a little less than this) of crystals of sodium acetate. Then add urine to the half-test tube. Boil the mixture till it becomes clear. Let it stand for fifteen minutes, and examine the sediment for crystals. If albumin is present, you must first coagulate and filter. The urine must be clear. If there

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*Berichte der Deutsche Chem. Gesellsch. zu Berlin, 17, 579.

† Annali di Chim. appl. alia Farmacie, 79, 258.

‡ Mittheilungen des Wiener Med. Doctoren-Collegiums, 10 Band. See, also his book, Klinische Diagnostik Innerer Krankheiten.

‖ Neubauer und Vogel, Analyse des Harns, 1881.

is no sugar, we find no such crystals. These crystals are in yellow sheaves, unlike any other product which appears in urine. Tyrosin gives crystals of a somewhat similar shape, but they are not yellow, and appear in urine only on rare occasions, as in acute yellow atrophy of the liver. This tyrosin, too, is a natural, not an artificial, product. Leucin, which has at times a somewhat similar shape, is unlike in color.

"This method is also useful for determining approximately the *quantity* of sugar in the urine."

Here, then, was a method which seemed in simplicity and accuracy to be exactly what is needed for the practicing physician's use.

I procured some of the phenyl-hydrazin chloride in Vienna, and since my return from Europe I have made a very careful study of the test as applied by Ultzmann (for convenience, I shall speak of it as "Ultzmann's method)." The result is that I fully endorse his recommendation of it, although, in some respects, my experience has been different from his.

In my experiments I have used no appliances save those which are within the reach of every physician. Yet, in determining the sensitiveness of the test, I have exercised the greatest care in the preparation and measurement of my standard solutions of sugar.

I make the test as follows: I pour the phenyl salt—which is a dry substance resembling bran—into an empty test-tube until the tube is filled to the distance of about four-tenths of an inch from the bottom, and add crystals of sodium acetate, ground fine, to an equal height. Upon this I pour the urine—clear or cloudy—until the tube is half full. This gives in a test-tube five inches long, about the following proportions in weight: 1 part phenyl salt, 2 parts sodium acetate, 15 parts urine. I shake the tube until the crystals of sodium acetate are dissolved, then heat gently over a low flame until the mixture boils, and boil it for about half a minute—whether it becomes clear or not makes no difference. I then cover the tube and let it stand, and, after a proper interval, examine the sediment with the microscope. If sugar is present there will be seen first fine, bright yellow needles, which branch out or are joined by others as they are formed, until the field is dotted with groups like delicate sprays or sheaves, or radiating from a centre. A magnifying power of 200 diameters is sufficient for this study. That the phenyl salt is always in excess when the test is made in this way, is shown by the constant presence of reddish globules in the field.

My experiments fall naturally into two series. The first series includes those made for the purpose of finding how long the mixture must stand before the crystals appear; of determining what percentage of sugar is necessary for the formation of the crystals; and of comparing the test, as simplified, with Fehling's test, which I believe to be the best heretofore in use. For this series I used, instead of pure grape sugar, which cannot easily be weighed, a crystalline compound of sodium chloride and grape sugar, which is easily weighed. A solution of this salt in distilled water (containing, by calculation, 1 part of anhydrous glucose to 1250 of water) gave, by Ultzmann's method, after standing eighteen minutes, a sediment in which, by aid of the microscope, the crystals could be seen grouping themselves into delicate, spray-like forms. The same mixture yielded, twenty-one hours later, a yellow sediment, which was seen, with a one-inch objective as

a hand-lens, to consist of feather-like groups of yellow, needle-shaped crystals. Under the microscope abundant sheaves of yellow crystals were seen. A mixture containing 1 part of sugar to 2000 parts of normal urine, which gave a fair reaction for sugar by Fehling's test, yielded, by Ultzmann's method, on standing twenty-two hours, four or five large yellow sheaves to a field of the microscope, and after it had stood forty-eight hours, about a dozen sheaves to a field. Mixtures containing 1 part sugar to 3000 or 4000 parts normal urine, which gave, with Fehling's fluid, very uncertain tests, yielded, by Ultzmann's method, after twenty-two hours later, no crystals; but twenty-three hours later several well-formed sheaves to a slide. It is possible that still more dilute solutions of sugar in urine might yield the crystals when treated in this way, but for ordinary office-use greater accuracy than this is not needed.

The second series includes those experiments made to determine whether, under any circumstances, the test, as applied by Ultzmann, fails to give the crystals in urine which contains more than one-fortieth per cent.—1 part to 4000 parts of grape sugar. In these experiments I used solutions of known strength of very pure grape sugar in distilled water. I treated by Ultzmann's method in all fourteen mixtures of these standard solutions with fresh, non-saccharine urine containing from one-thirty-sixth to one-half per cent. grape sugar, and obtained the yellow crystals in every case. In eleven of them the crystals appeared within twenty-four hours after the test was made; in three of them when the mixtures had stood more than twenty-four hours. Several of these fourteen mixtures were made with urine which threw down phosphates on boiling; one with urine which yielded, on standing before being tested, a very abundant sediment of urates; one with urine containing a considerable quantity of albumin—the yellow crystals in this case in part appearing in the masses of coagulum, in part settling from the supernatant fluid in the form of sheaves; one with urine to which I had added quite an excess of sodium bicarbonate, to find whether alkalinity of the urine interferes with the test—in this case brisk effervescence occurred from the action of the bicarbonate upon the phenyl salt, but, as the latter was in excess, the solution continued acid and the crystals appeared, though in smaller numbers than usual.

These tests with artificial solutions of glucose in urine were confirmed by similar tests with the urine of patients suffering from diabetes mellitus.

Many tests were made with normal urine, but in none of them could I find even a single yellow crystal or sheaf.

Through the kindness of a medical friend, I had the opportunity of testing, by Ultzmann's method, a very interesting specimen of urine,* which contains a substance which was mistaken for sugar by several life insurance examiners. This urine behaved with the phenyl-hydrazin test exactly like normal urine.

In the sediments from a solution of sugar in hydrant water, tested by Ultzmann's method, a yellow plant was found under the microscope, which in its very earliest stages resembled somewhat in color and form small sprays of sugar crystals. Upon further observation, however, the peculiar manner of growth of the

*Described by Dr. Bruen, *Boston Med. and Surg. Journal*, December 30, 1886, and January 27, 1887; and by Dr. Marshall, *The Medical News*, January 8, 1887.

plant removed all doubt upon the subject. This plant was not found in any of the urine mixtures.

I will now state briefly the results of my work:

The test of Fischer, as applied by Ultzmann, is easy to make, and does not take more time than Fehling's test, if, as is necessary, the latter be made with fresh solutions.

It is suitable for office use by physicians, and may be accurately made by those whose training in chemistry is imperfect.

It does not require great skill in the use of the microscope. In all my examinations the crystals, if present, were found upon the first slide examined.

When the sugar present amounts to one-fifteenth per cent., the crystals may be found fifteen minutes after the test is made.

The test is about as sensitive in the presence of sugar as that of Fehling, and is not liable to be disturbed by other substances contained in the urine. It is obtained in alkaline as well as in acid, in cloudy as well as in clear urine.

Normal urine does not respond to the test.

If the crystals are found, the proof of the presence of sugar is absolute.

My experiments lead me to believe that in *all* cases in which sugar is present in the urine to the amount of one-fortieth per cent. or more, the crystals may be found—although it may be necessary, when the quantity of sugar is very small, to let the mixture stand after boiling as many as forty-eight hours.

The single crystals show a strong tendency, in the most dilute as well as the most concentrated solutions of sugar, to form clusters; so that, in solutions which have stood some time, only the characteristic clusters may be found.

The crystals or clusters undergo no change of importance in aqueous solutions for a month or more, and so any sediment may be preserved and inspected from time to time. Even in urine mixtures they remain for weeks unchanged, decomposition of the mixture being prevented by the phenyl salt.

Ultzmann's method may be used for rough *quantitative* determinations. In case the urine contains one-tenth per cent. or more of sugar, we may estimate the amount from the quantity of yellow crystalline sediments, even when the urine is not clear. When less than one-tenth per cent. is present, the amount may be roughly estimated from the number of crystals in a field of the microscope.

The salt of phenyl-hydrazin used for the test is quite stable, retaining its properties for months (apparently for years), even when exposed frequently to the air.*

Massage as a Means of Treatment in Chronic Dyspepsia and in Sleeplessness.†

A. Symons Eccles, M. B., C. M., late Surgeon Imperial Ottoman Medical Service, is reported as follows, with regard to his treatment by this method, in the *Brit. Med. Journal*, Sept. 3, 1887:

*Phenyl-hydrazin chlor. hydrat. may be obtained from the Eimer & Amend, 205 Third Avenue, New York.

† Presented to the Section of Pharmacology and Therapeutics at the Annual Meeting of the British Medical Association in Dublin.

The ever-increasing literature devoted to the consideration of chronic, gastric, and intestinal affections, together with the constantly-recurring advertisements of various aids to digestion published in medical journals, inclines one to believe that the majority of those who are engaged in the study and treatment of disease have experienced the same almost insurmountable difficulties in dealing with certain so-called functional disorders of the abdominal organs as myself; and in this belief I venture to bring to your notice the results of mechanical rather than medicinal means employed in the treatment of chronic dyspepsia.

There are two classes of cases in which massage has proved serviceable in my hands; the first is that which we know as atonic dyspepsia, where the abdominal organs partake of the generally anæmic, feeble, apathetic condition which appears to pervade the whole system and personality of the patient, frequently to such an extent that the disorder of digestion is overshadowed by the nervous symptoms, so that the case is regarded as one of neurasthenia rather than dyspepsia; although careful investigation into the history of the patient will lead to the establishment, in one's mental estimate of the symptoms, of some more or less serious interference with the health of the gastro-intestinal tract as the starting point from which all the graphically-related troubles and woes of the neurasthenic sufferer have been evolved.

The second class of cases, of which I have not had the opportunity of treating so many as of the first, is characterized by all the symptoms of chronic gastric catarrh, due in some to interference with the portal circulation, and in two patients to direct irritation of the stomach, by alcohol in the one case and tea in the other.

The distinction between the atonic cases on the one hand and the irritable cases on the other, has been made here because one has learned by experience that the mode of administering massage should be varied with the condition of the patient.

In the one class wherein we have the symptoms of a large, pale tongue, marked with the teeth, accompanied by loss of appetite, a sense of oppression and overdistension after small quantities of food, and constant flatulence with habitual constipation, occurring in a feeble patient who has lost weight and energy, I have found it useless to practice massage too frequently at first, and the plan of treatment which has proved most successful in these cases is, with slight modifications in individuals when accidental circumstances arose, as follows: Absolute rest in bed is enforced for a period varying between three and four weeks, according to the rapidity with which the case yields to treatment, the patient only being permitted to rise for the purpose of bathing or obeying the calls of nature. A cold sponge bath, which is taken after the first meal in the morning, and occupies less than three minutes, is followed instantly by a hot footbath, the patient standing in this while the body is rapidly dried; general corporeal massage is then performed, the limbs and trunk being first subjected to rapid effleurage (rubbing), then abdominal massage follows, the walls being first vigorously rubbed and rolled between the hands, after which deeper kneading of the liver, stomach, and intestines is carried out, this manipulation terminating with somewhat firm friction along the course of the colon.

This process of abdominal massage, as I have noticed in dealing with its physiological effects on healthy persons, is followed by a remarkable diminution in the

pulse-rate, in some cases the reduction being as many as 30 or 40 beats a minute; and in one case of an old lady, over 80 years of age, the depressant effect was such that the pulse became intermittent; but, on employing effleurage, over the back especially, and then of the limbs, the pulse regained its normal tone and rate. It is, therefore, my invariable practice with weak and anæmic patients to conclude the sitting by rapid friction of the general surface of the body, whether kneading of the limb and trunk muscles (after the abdominal massage) is practiced or not.

One sitting such as I have described generally suffices for the twenty-four hours; but, if there is much flatulence, the abdominal viscera are again gently kneaded in the evening, and, if the patient is restless and disinclined to sleep, gentle effleurage of the limbs and trunk usually results in soothing the patient, and, as I have frequently found, induces pleasant and refreshing sleep, though as a rule it takes a long time before your dyspeptic friend is freed from the grotesque and ofttimes hideous dreams which are the almost constant concomitant of disordered digestion.

General massage, then, is performed once daily, abdominal massage once or twice as indicated, and sometimes evening effleurage for a period which rarely exceeds a week, at the expiration of which it will generally be found that the patient will bear thorough vigorous manipulation once daily, followed by more gentle handling in the evening, the force of which may be increased as the strength and weight of the patient improve. I have never seen any advantage accrue from the performance of properly administered massage more than thrice daily in these cases of a tonic dyspepsia, and if the temperature, pulse, bodily strength, and weight are carefully noted, I think it will invariably be found that any increase in the number of sittings will retard rather than advance recovery.

With regard to the dietetic treatment of these cases, it would be presumptuous on my part to suggest that any plan devised by myself is superior to that generally followed, and modified to suit the needs of individuals by those who have greater knowledge and keener insight in regard to the processes of digestion, whose footsteps I have followed only, I fear, at too great a distance; but, in order that this record may not be incomplete in this respect, I would briefly indicate what is doubtless a well worn track.

At the commencement of the treatment, the practice of Weir Mitchell has been imitated, the patient taking at intervals of two or three hours, according to circumstances, from 4 to 6 ounces of peptonised milk, which has usually been prepared for me by Messrs. Welford and Sons, but which can, with some little expenditure of care and patience, be made at home by a skillful cook, the functionary on whom, I am bound to say, no small proportion of the success attending this treatment depends.

Directly after the morning massage a teacup of hot beef essence, to which is sometimes added the unbeaten white of one egg, is given; so that during the first week the diet consists exclusively of about thirty-six ounces of milk and six ounces of strong beef essence daily. The quantity of milk is gradually increased after this till five pints are consumed daily; at first one and then two milk puddings, containing half a pint of milk and one egg in each, being included in this

quantity. About the same time as the puddings are added to the dietary, the quantity of meat juice is increased gradually, sometimes hot, in other cases prepared and taken cold. At the end of the third week raw meat sandwiches, and later cooked meat, stewed fruits, and green vegetables, with toast and thin rolled fried bacon, are included in the diet scale. At the same time the passive exercises which have been added to the morning sitting for massage during the third week are, when meat is being taken, supplemented by a series of active exercises increasing in number and force till the patient is able to digest and assimilate food without difficulty—a result obtained in twelve out of fifteen cases which have come under my care.

You will remember that at the outset of this paper I referred to the existence of cases in which the inability to digest and assimilate food resulted in a condition which we know under the name of neurasthenia. It may be that dyspepsia is the earliest sign of general faulty innervation; but, whether that be so or not, there are cases which one has seen where the neurasthenic condition has passed away as soon as the patient has regained the power of truly digesting nourishishment; and this happy result is attained in the cases to which I refer without the enforcement of that rigid seclusion recognized as perhaps the most potent factor in dealing with hysterical and nervous patients as a rule.

One case, in which the whole alimentary tract was affected by an indolent ulcerative condition of the mucous membrane, giving rise to dysphagia, vomiting, and diarrhœa, sometimes dysenteric in character, will serve to illustrate my meaning in regard to the initiation of neurasthenia by atonic dyspepsia. The patient, sent to me by Dr. Lauder Brunton, was a lady, aged 38, married at a very early age, had borne children rapidly in a hot climate, where she had contracted ague, malarial sore mouth, and chronic dyspepsia as a consequence. For eight years she had been rarely able to take food without much suffering, and frequently any attempt to digest animal food was followed by sickness and diarrhœa. Indeed, her sufferings, as detailed by the patient at our first interview, were, although doubtless exaggerated, sufficiently real to excite commiseration in the most stony-hearted professor of the Weir Mitchell treatment; for, in addition to the painful state of the alimentary mucous tract, there was considerable brawny œdema of the left leg, which had followed a tedious confinement. The complexion was pale and sallow; and, although the patient was a brunette, the skin of the rest of the body was blanched to a deadly whiteness, the finger and toe nails being devoid of color. The tongue was large, pale, deeply indented by the teeth, with two or three patches of ulceration on the dorsum and edges, the fauces and gums being swollen and bloodless, with ulceration at the base of the teeth and on the palate. The pulse was small, easily compressible, and rapid, varying between 90 and 110. There was no appetite, but rather a distaste for food, which, even in small quantities, produced a sensation of fullness and weight in the epigastrium; while within half an hour of taking nourishment the abdomen became distended and hard. Flatulence was persistent, and vomiting occurred after every meal for three days after admission.

Constipation existed for some time previous to my seeing the patient, and continued for more than fortnight after, alternating with small, hard, clay-colored stools, which followed the exhibition of a pill containing two and a half grains

each of dried ox-gall and cascara sagrada extract twice daily; calomel given in the ordinary way, as also in the form of Warner's parvules, had no effect in altering the character of the evacuations. The liver was smaller than natural. The urine was scanty, high colored, specific gravity 1030, containing lithates, a trace of albumin, no sugar.

The other organs were apparently healthy, save that the heart-sounds were feeble and accompanied by an anæmic *bruit.* The patient was placed on the strict regimen previously described, massage was performed once daily, abdominal massage twice. Frequent vomiting, restless nights, flatulence and weeping continued for a fortnight, when I almost despaired of making any impression; but at the request of the husband, the treatment was persevered with. Gradually the vomiting of curdled masses subsided; after massage of the abdomen the patient experienced relief from the sense of tension and oppression, the flatulence became easy of dispersion; the diet was taken without repugnance, and on the twenty-first day of treatment the patient (5 feet 9 inches in height, large framed) who weighed on admission 8 st. 9 lb., now scaled 9 st. From this date progress was rapid, the coldness of the extremities gave place to healthy warmth, the complexion and skin assumed a ruddier tint, the nails becoming pink, and the general texture of the integuments firmer. Meanwhile the appetite improved so that the patient was able to take three meat meals daily, in addition to the milk diet, and that this large quantity of food was assimilated, the steady gain in weight proved, for on the forty-second day of treatment the patient scaled 9 st. 12 lbs., showing an increase of 17 lbs. since the first day of treatment. A week after the weight was 10 stone, and on the conclusion of the treatment the weight had risen to 10 st. 4 lbs., showing a total gain in nine weeks of 23 lbs. The subjective symptoms of dyspepsia were no longer present, the ulceration of the tongue and gums disappeared, while the buccal mucous membrane was firm and well colored. Pain in the back, which existed in a marked degree between the shoulders, ceased, and the patient, from a gaunt, pale, haggard, and unhappy dyspectic, developed into a well-proportioned, cheerful, and contented person, for whom a prolonged sojourn on the Engadine completed the restoration to good health, which has been continued for upwards of seven months, as the following extract from a letter dated July 16, 1887, will show; the patient writes: "I am thankful to say I am keeping very well and strong, but I have certainly lost weight since I left you; but this is not surprising considering how I knock about in spite of the heat, generally walking four or five miles a day." This patient called on me shortly before I left town for this meeting, when I found that the loss of weight was only four and a half pounds, while in every other respect her health was as good as when she left my house.

It may be argued that the case just cited was not one of typical atonic dyspepsia, and therefore not fairly illustrative of the value of massage in such conditions of the digestive organs, which it is the purpose of this paper to demonstrate; but it has been introduced to your notice here with a view to show that even where the lining membrane of the alimentary canal is so far diseased as we believe it to be in malarial sore mouth, and as we can see it is in so far as the oral cavity is concerned, massage of the skeletal muscles and abdominal organs will promote a better nutrition of the structures more particularly engaged in the

adaptation and absorption of material for nourishing the body, while it undoubtedly aids the second digestion of the matters necessary to the building up of the various tissues throughout the system.

The next case to which I wish briefly to refer is that of a gentleman, aged 47, who, in addition to his duties as the head of a business firm in the city of London, is well known in the charitable world for the devotion of twenty-five years of his life to the active superintendence of an important mission amongst the criminal classes. This patient had for more than two years suffered from loss of appetite, constipation, frequent bilious attacks, and nausea, resulting in general inability for work, sleeplessness, and depression, culminating in a thorough breakdown and absolute insomnia, which Dr. Arthur Gamgee, who sent me the patient from Hastings, found little if at all amenable to treatment, and, at his request, the case came under my care. At my first interview, in consultation with Dr. Dean, who had previously sent the case to Hastings, I found the patient fairly nourished, though very flabby, the skin clammy, complexion sallow, with dark rings under the eyes, and the pupils widely dilated. The tongue was large, marked with the teeth, and thickly furred. Breath very offensive, pulse small and hurried. Thoracic organs normal. Abdomen full, distended by flatulence, frequently expelled as ill-smelling eructations, but without relieving the constant palpitation which alarmed the patient. Nausea, headache, frontal and temporal, constipation, and sleeplessness were the chief features in the sufferer's complaints. On admission the weight was 10 stone; height, 5 feet 7 inches.

After ten days' massage, the patient experienced a desire to relieve the bowels, which he had not previously felt for many months, and, an examination *per rectum* revealing the presence of scybala, these were removed, and were followed by a copious action. I had anticipated much from such an unloading of the lower bowel; but the general condition remained unchanged, the patient obtaining no more than three or four hours' sleep nightly, and still suffering from nausea, flatulence, and headache, while the breath and tongue continued foul.

About the twenty-fourth day of treatment, the headache, previously constant, became less marked and intermittent; relief from the bowels was obtained every morning, and gradually the length of sleep increased, while abdominal massage caused the expulsion of much flatus, which ceased to accumulate to the same degree as before. On the thirty-third day of treatment, I find, on reference to my note-book, that the patient had slept nine hours, complained little of headache, the tongue was slightly furred; no palpitation or discomfort after food, though the diet now consisted of three pints of milk, one pint of meat-juice, with cocoa, toast and butter, and a lightly poached egg for breakfast; meat, green vegetables and stewed fruit for dinner. From this date improvement was steady, the patient became cheerful, his whole aspect was changed; and on the fifty-sixth day, having having spent six hours daily in carriage and active exercise for ten days, he left for a sojourn in the highlands of Switzerland, at the suggestion of Dr. Gamgee, traveling through to Bâle, a journey of nineteen hours, without any untoward result; and in a letter dated July 9th, the patient describes himself as a different man, taking long walks and enjoying them.

I have selected the foregoing cases from those which my note-book contains as both before and during treatment they have been under the observation of Dr.

Brunton in the one case, and Dr. Gamgee in the other, who kindly watched their progress while under my care, and to whom I am indebted for these and other opportunities for the practice of massage.

Of the remaining cases of atonic dyspepsia subjected to massage with the best results it is not possible, within the limits of this paper, to give the details even in the abridged form adopted in the description of those just cited; but, briefly, I would say that, with three exceptions, all the dyspeptics on whom I have practised this plan of treatment have regained their power to digest and assimilate food. Four of them were City men, who, under the combined influence of business-worry, irregular meals, frequent "pick-me-ups," and no exercise, lost the clear head, good digestion, and dreamless sleep needed in order to carry out the complicated mysteries of which, to the uninitiated professional mind, the commerce of the present day appears to be made up. It may be that the enforced rest and absence from business will be regarded as a potent factor in the restoration to health which it is sought to be shown is justly attributable to massage; but as to that, two of my patients transacted business during the progress of the treatment; and although some amount of worry invaded the sick rooms, both of these gentlemen were restored to better health than they had enjoyed for some years, and, as I have since learned, are no longer harassed by the ills which chronic dyspepsia had previously entailed.

Reference has been made to certain cases of chronic gastritis, in which massage has proved useful, and in order to illustrate its employment in this connection, I will ask your indulgence while in a very few words the effect of the treatment adopted in what bade fair to be a very troublesome case is recorded. The patient, a florid, fair-complexioned man, aged 35, somewhat inclined to be stout, but with very ill-developed and flabby muscles, was sent to me by Dr. Ferrier, who had seen the case for the first time three days previously. He was in an extremely irritable condition, the face congested, conjunctivæ suffused, pupils dilated, and with a wild distressed expression of countenance. The tongue was thickly coated with white fur, the tip and edges raw and angry, such as one sees in gastritis; the hands were very tremulous, and the patient was altogether in an excitable, restless condition, much resembling the first stage of *delirium tremens*. He complained of constant nausea, palpitation, a sinking sensation in the epigastrium, and declared that for six months he had not been free, to use his own words, "from a constant fearful feeling of sickness day and night," which had come on intermittently three months before. For twelve years there had been dyspepsia, for which he had consulted several physicians, both at home and on the Continent; a visit to Kissingen six years ago had improved the digestion for a short time, but Carlsbad had made him worse. Professor Leube, of Würzburg, had washed out the stomach, and declined to treat the case, on which the patient returned to England, and, under the impression that nothing could be done by medical science, he began to resort to beer and spirits in order to temporarily relieve his discomfort; this, of course, aggravated the suffering and affected his nervous system as I have described, at the same time increasing, if it did not actually set up, the condition of gastritis, which was the most prominent feature in the case, if we exclude the absolute insomnia from which both the patient and his friends alleged that he suffered. The abdomen, on admission, was much dis-

tended; there was tenderness over the stomach, as also over the last dorsal spine, while the whole surface of the trunk and limbs was hyperæsthetic, and the back was covered with acne.

On admission the patient was placed in bed, and half a pint of iced milk given every three hours to be slowly sipped; abdominal massage was vigorously performed for twenty minutes, with the result of reducing the pulse from 96 to 70 beats per minute, and the respiration from 36 to 20; gentle effleurage of the spine concluded the evening sitting. A draught of thirty minims of paraldehyde, with twenty grains of chloral, failed to produce any sleep that night.

On the following day the same diet was given; abdominal massage was performed in the morning after a bath, in the afternoon, and again at night, for twenty minutes on each occasion, the back being also kneaded morning and night for ten minutes. Flatus was expelled after each sitting, the abdomen being reduced from forty-five to thirty-eight inches during the day. That night there were two hours of sleep without drugs, the nausea still continuing; on the third night four hours, still nausea; on the fourth and fifth the same amount of sleep, the treatment continued as on second day.

On the sixth day there was what the patient called "cramp in the stomach;" the icing of the milk was therefore stopped.

On the eighth day my note says: "Last night slept seven hours without waking; nausea no longer constant; relief from bowels once this morning; tongue cleaner; hyperæsthesia less." General massage once daily, in addition to previously recorded abdominal and dorsal kneading, was now performed.

On the eleventh day of treatment the note is that the patient "has slept well eight hours for the last three nights; tongue clearing; bread and butter with three of the meals."

On the twelfth day nausea slight; sleep not so good last night.

On the twenty-third day I find that the patient had slept eight or nine hours every night since the twelfth; that the diet, which was gradually augmented, now consists of four pints of milk, bread and butter, and half a pint of beef-tea; the face is no longer livid, tremulousness has ceased, and nausea is rarely complained of.

A week after, the number of sittings was reduced to one every morning and evening, the patient walking a little in the open air daily. A meat meal was now given in the middle of the day, and the quantity of milk reduced to one quart. From this time the progress of the patient towards recovery was steady and unimpeded; he was able to spend some hours daily at the piano, on which he was a performer of no mean merit. A visit to the American Exhibition produced no more than ordinary fatigue; and from an irritable, restless, and difficult invalid, who felt and looked wretchedly ill, this patient became a genial, witty, and agreeable guest.

This is a fairly typical example of what a methodical application of massage will effect in cases of chronic gastritis; and, while practicing this treatment on patients whose sufferings have been but slightly, if at all, relieved by other means, one has learnt to regard it as a therapeutical agent of great value when rightly used and skillfully applied.

Diet in Albuminuria.

The following lecture upon the important subject of diet in albuminuria, was delivered in the University of Edinburgh, by T. GRAINGER STEWART. M. D., Professor of the Practice of Physic in the University of Edinburgh, Physician in Ordinary to the Queen for Scotland.

I purpose to-day to bring before you the question of the influence of diet on the different varieties of albuminuria. It is a subject which, although often and carefully studied, is well worthy of further investigation, and I shall, after indicating the views generally held by the profession, bring under your notice the results of some observations which, with the aid of my resident physicians, Drs. Gulland and Pirie, I have made with the view of testing the accuracy of current opinion. We have sought to throw some additional light upon the question of the possibility of producing albuminuria by diet in persons whose kidneys were healthy, and as to the effect of various forms of diet in patients affected with albuminuria.

I shall speak first of the production of albuminuria by diet. The facts with which you are already familiar regarding the frequent occurrence of slight, and the occasional occurrence of marked albuminuria after meals [*Practitioner*, xxxix, 57], have prepared you to expect that interesting results might be obtained by means of accurate experiments. We have seen that in certain individuals the mere ingestion of food of whatever kind is followed by albuminuria, and that in others particular kinds of food produce this effect, while most articles of diet do not. Precise experiments have been made, especially with regard to the influence of egg-albumen, with the view of ascertaining whether that substance introduced into the system in large quantity induces albuminuria, what the variety of albumin is when albuminuria does appear, in what condition the egg-albumen must be introduced, and by what channels it must enter the circulation. The experiments of many observers, among whom I shall mention Stokvis (whose work I have always found careful and his conclusions trustworthy), showed that the injection of egg-albumen into the veins of animals invariably produces albuminuria, while the injection of serum-albumen of an animal of the same species produces no such result, unless the quantity is such as to produce a signal rise in the blood-pressure; and in these experiments it was found that egg-albumen appeared as such in the urine, so that it manifestly passed out of the system unchanged.

It may also be accepted as demonstrated that the injection of egg-albumen into the rectum is followed by a similar albuminuria.

But as to the effect of introducing it into the stomach there is more doubt. Thus it may be introduced either in its natural condition or coagulated by cooking, and it is necessary to distinguish the result of each method. We of course set aside the cases in which, from an idiosyncrasy, the ingestion of eggs is always followed by constitutional disturbance with derangement of the stomach and sometimes albuminuria. Apart from such cases considerable difference of opinion exists as to the facts. Senator states that the investigations of Lehmann, Stokvis, and Creite show beyond doubt that egg-albumen is really excreted as such, and that in the majority of cases the albuminuria disappears with its excretion, the investigations having been performed on the observers themselves, on other persons, or on dogs and rabbits. Dr. Coates expressed, in 1884, the same

opinion, and quoted the experiments of Nussbaum to show that egg-albumen, (when injected into the veins of animals) passes out by the glomerular tufts which retain the serum-albumen. Dr. Lauder Brunton failed to produce albuminuria in himself by swallowing six raw eggs in succession, but violent headache and sickness were produced, while D'Arcy Power, on the other hand, succeeded in producing albuminuria in this way. Regarding the explanation of the albuminuria thus produced these authors remark that "it is only when the digestive powers are overtaxed, as by swallowing many raw eggs together, or deranged so as to digest the food partially but not completely, that such an event occurs." Dr. Maguire, in an able paper upon the albumens of the urine, states that he failed to produce albuminuria by swallowing the whites of twelve raw eggs, a slight headache being the only effect produced. He rightly points out that the severe digestive disturbance indicated by diarrhœa, and the appearance of bile in the urine, which was produced in the animals fed by Stokvis for several days upon raw egg-albumen, may account for the albuminuria, and he doubts whether observers have taken sufficient care to ascertain whether egg-albumen or albumen in another form appeared in the urine. Dr. Dobradin found no albumin in his own urine after he had eaten nineteen raw eggs in thirty-six hours. These remarks apply to the result of dieting with raw eggs. But Claude Bernard and (I suppose) others have found that albuminuria may be produced by eating large numbers of cooked eggs. This of course stands on a different footing from the experiments made with uncooked eggs, for however the latter might be absorbed into the system unchanged, the former must necessarily be digested.

As our information upon this matter seemed to me somewhat unsatisfactory, I thought it well to institute some experiments on the point. I selected for the purpose four individuals whose urine showed no albumin even when tested with picric acid, and whose condition offered no objection to such a trial being made. In the first case—one of locomotor ataxia—the patient took ten raw eggs daily, in addition to his ordinary diet, for a period of nine days. In two days from the commencement albumin appeared. It was not in large quantity, but quite sufficient to be demonstrated by picric acid. On two occasions it was demonstrable with nitric acid, and on each of them the addition of excess of the acid redissolved the coagulum, showing that it was not egg-albumen, but blood-albumen that was present. The albumin persisted from the second day to the end of the experiment, but disappeared on the day in which the eggs were stopped. In the second case—one of mitral incompetence—nine eggs were given daily for a period of seven days. Albumin appeared on the first day, persisted throughout the experiment, and disappeared when the eggs were discontinued. Although distinct with picric, it never showed with nitric acid. In the third case—one free from organic lesion—ten eggs were given daily for three days in addition to the ordinary diet. On the first and third days albumin was distinct with picric acid. On the second day it was in such quantity as to be shown with nitric acid, and in this case also the opacity readily disappeared when an excess of the reagent was used. In the fourth case—one of chorea—the eggs were not well borne by the stomach; only three were taken, and the experiment was continued only for three days. But in it also albumin showed itself with picric acid on the third day, and disappeared when the patient resumed his ordinary diet.

The results of these experiments go to confirm the impression that the introduction of raw egg-albumen into the stomach induces albuminuria; that the albumin is always in small quantity; that it disappears when the ordinary diet is resumed; and that it is not egg-albumen, but serum-albumen, which is discharged. Explanations of this kind of albuminuria on the theory of absorption of egg-albumen as such into the blood, and its discharge from the kidneys, must be set aside, and with it also the speculation—so far as this question is concerned—as to the minute size of the molecules of egg-albumen and its greater transfusibility. In these experiments also it was clear that the albuminuria was not a result of gastric disturbance produced by diet, for no gastric disturbance manifested itself in the cases in which the albuminuria was most distinct. Two suggestions may be offered by way of explanation. One is, that owing to the large amount of albumen digested and absorbed, the blood becomes surcharged with that ingredient, and some of the excess escapes by the kidneys. The other explanation stands in relation to some recent investigations on allied topics by Dr. Ralfe, Dr. Noël-Paton, and Dr. Thomas Oliver of Newcastle. Dr. Ralfe has shown in an interesting way the relation of functional albuminuria and hæmoglobinuria to the rate of destruction of the red blood-corpuscles, and of the formation of urea. Dr. Noël-Paton has brought out some of the relations which exist between bile secretion and urea formation. Dr. Oliver has shown that the urea is mainly formed from the red blood-corpuscles, and that the most active period of urea formation is when the liver is actively secreting during digestion. It seems, in the light of all these observations, reasonable to suppose that in our experiments the liver was stimulated to excessive activity owing to the excessive amount of proteids ingested, that thus the red blood-corpuscles were more rapidly destroyed, and that the albumen liberated from them not being all transformed into urea was in part discharged by the kidneys. This suggestion receives some confirmation from the facts which we observed in regard to the urea discharged. In the first case there was a marked increase in its amount after the eggs were commenced, followed by as marked a fall on the day after ordinary diet was resumed. In the second case the urea was over the normal, except on one day, during the whole time that the eggs were taken and for two days afterwards, then followed a fall to the normal amount. In the third case also an increase of urea was distinct, although the results were less striking from the brevity of the experiment. In the fourth case the effects were doubtful, but it will be remembered that only three eggs were taken daily.

Apart from the egg-albumen diet, I was anxious to get information as to other food substances which are supposed to stand in close relationship to albuminuria. Remembering the prominence which Sir Robert Christison's remarks in regard to *cheese* had given to that substance in this respect, I arranged to give a good supply of it to twenty healthy boys, and to test their urine before and after its use. I show you in tabular form the results brought out by this experiment. Two ounces of Cheddar cheese were taken by each boy soon after twelve o'clock, breakfast having been taken at eight, and a specimen passed before taking the cheese was compared with one voided shortly afterwards.

TABLE SHOWING THE EFFECT OF CHEESE ON THE INCIDENCE OF ALBUMINURIA IN TWENTY PRESUMABLY HEALTHY BOYS.

	BEFORE CHEESE.			AFTER CHEESE.		
Number.	With nitric acid.	With picric acid.	Total.	With nitric acid.	With picric acid.	Total.
20	1	6	7	0	6	6

You observe that while one showed albumin with nitric acid (only a trace) and six with picric, before the repast, none showed it with nitric and six with picric afterwards; but the latter six did not exactly correspond to the former, for one boy who showed no albumin before eating, showed it afterwards. The boy who showed it with nitric acid before, showed only with picric acid afterwards. Two others who had had a distinct picric acid reaction before, showed only the faintest trace afterwards. And in one it disappeared in the later though present in the first specimen. These results point to the conclusion that cheese, when eaten in reasonable amount, has little or no effect in producing albuminuria in healthy people. Those in whom it has this effect must be regarded as the subjects of idiosyncrasy. It is possible that the large proportion of albuminuria in the twenty boys before the cheese was eaten was due to the effect of the breakfast not having yet passed off at the time of the earlier micturition.

I thought also that it might be well to try the effect of *walnuts* in this respect, and accordingly gave ten presumably healthy boys six walnuts each. They were taken apart from meals, and a specimen of urine was obtained before and some time after they had been taken. The result showed that while before taking the walnuts one showed albumin with nitric acid, and other two with picric acid; afterwards a different one showed with nitric acid who had only shown with picric before, and other three showed with picric acid. Thus there was increase of the whole number showing albumin. The boy who had shown with nitric acid before showed only with picric afterwards. From this experiment it appears that the use of such articles of diet, even in moderate quantity, may suffice to produce albuminuria in some individuals, and certainly, at all events, it proved more active than cheese. The six walnuts weighed, without their shells, only five drachms, and yet the effect was very distinct.

Our general conclusion as to this part of our subject is, that while the ingestion of food has been shown frequently to produce albuminuria from idiosyncratic peculiarities, particular articles of diet induce it in some people, and while we may succeed in inducing it by the use of special articles of diet, yet the quantity of albumin is usually minute, and it has little tendency to persist after the resumption of ordinary food.

Proceeding now to consider the second part of our subject, I shall speak first of the diet in Bright's disease. The profession is for the most part agreed as to what is most suitable. I shall content myself with quoting the statements of one or two of the most judicious writers on the subject. Dr. Dickinson says that in the *inflammation of the tubules* spare diet with plenty of water, abundance of milk, and sufficiency of light broth or beef tea, is best. In *cirrhosis* the food should be as non-nitrogenous as is consistent with the proper nutrition of the patient. Purely vegetable diet has not succeeded, and the anæmic tendencies forbid a non-nutritious regimen, but the patient should be kept upon the smallest amount of food on which he can thrive. In the *waxy disease* he recommends

that the diet should be generous and varied, and that extra supplies of beef tea and Liebig's extract should be given for the sake of the saline constituents.

The late Professor Bartels of Kiel recommended in *acute tubular inflammation* a milk diet with all its possible modifications as the ideal bill of fare. If the digestive organs and the appetite permitted, he recommended a more solid diet, consisting of easily digested meats, light vegetable food, and good bread. In *chronic inflammation of the tubules* the milk seemed to him more essential, especially where there was loss of appetite, which he ascribed to œdema of the gastric mucous membrane. In *cirrhosis* of the kidney he thought it best to sustain the strength by abundant meat, milk, and mixed vegetable dietary. In *waxy cases* he praises the effect of liberal diet of meat and milk with the use of good wine.

It were tedious for me to quote to you the very similar conclusions of Johnson, Roberts, Rosenstein, Purdy, and other writers. You may assume that the two whom I have quoted represent the views generally held by judicious practitioners.

It will be apparent from the results which I have now to lay before you that these views are generally confirmed by our observations. I wish that the importance of our results had been more commensurate with the amount of time and labor expended upon them.

The diets which we employed were five in number:—(I) ordinary, (II) large, (III) milk, (IV) low, (V) low diet with eggs. The annexed tables show the composition, weight, and the amount of carbon and of nitrogen contained in each:

I. Ordinary Diet.

	Ounces.	Carbonaceous.	Nitrogenous.	Total.
Meat (minced collops)	8	1.2	1.61	2.81
Bread	12	6.18	1.26	7.44
Potatoes	12	2.94	0.30	3.24
Sugar	2	2.00	0.00	2.00
Milk	24	1.92	1.08	3.00
Butter	1	1.00	0.00	1.00
Total	59	15.24	4.25	19.49

II. Large Diet.

	Ounces.	Carbonaceous.	Nitrogenous.	Total.
Meat (minced collops)	16	2.40	3.22	5.62
Bread	16	8.84	1.08	9.92
Potatoes	12	2.94	0.30	3.24
Sugar	2	2.00	0.00	2.00
Milk	24	1.92	1.08	3.00
Butter	1	1.00	0.00	1.00
Total	71	19.10	5.68	24.78

III. Milk Diet.

	Ounces.	Carbonaceous.	Nitrogenous.	Total.
Milk	80	6.4	3.6	10.0

IV. Low Diet.

	Ounces.	Carbonaceous.	Nitrogenous.	Total.
Bread	12	6.18	1.26	7.44
Potatoes	24	5.88	0.60	6.48
Sugar	4	4.00	0.00	4.00
Milk	24	1.92	1.08	3.00
Butter	1	1.00	0.00	1.00
Total	65	18.98	2.94	21.92

V. Low Diet with Eggs.

	Ounces.	Carbonaceous.	Nitrogenous.	Total.
Eight raw eggs	14½	4.35	5.8	10.15.

(otherwise as in IV.)

The points determined in each case were the weight of the patient, the daily amount of urine, its specific gravity, the amount of urea, and the amount of albumin in grammes per litre as determined by Esbach's method.

I. INFLAMMATORY BRIGHT'S DISEASE.

T. T., æt. 19, a gardener, was admitted to Ward xxii. on December 24, 1886, suffering from dropsy, and had been ill for eight weeks. Early in October the patient had scarlet fever. During desquamation he went out and was exposed to cold. He was then taken with dropsy, and diminution of urine and the ordinary features of post-scarlatinal nephritis appeared. As the symptoms did not yield, he was sent to the Infirmary.

In this patient trial was made of the effects of ordinary diet for seventeen days, milk diet for eight days, and low diet for eight days. The analysis showed that each of the three brought out essentially the same result, both in respect of the urea and the albumin. I should not have considered it right to give the large diet to this patient, as it might have proved irritating to the kidneys.

L. M., æt. 52, an unmarried woman, was admitted to Ward xxv. on December 7, 1886, suffering from subacute inflammatory Bright's disease. She had been ill for about a month. Her chief complaints were of dropsy and debility. Her urine was on admission 22 ounces in the 24 hours. It was of pale straw color, its specific gravity 1016; it contained 131.12 grains of urea and 1.25 grammes of albumin per litre, and deposited a few blood-corpuscles and a good many granular, epithelial, and hyaline tube-casts. The dropsy was distinct, although not severe. The pulse was regular and rather tense, but there was a systolic murmur most audible in the aortic area. In this case it was somewhat difficult to judge of the effects of the diet, as the patient was making throughout steady although rather slow progress towards recovery. The ordinary, the large, the milk, and the low diets were tried in succession, and we came to the conclusion that the two lighter did better with her than the first two, and that the low diet was the best of all. While under ordinary diet she was passing 46½ ounces of urine, containing 270.7 grains of urea, and 1.75 grammes of albumin per litre, under the large she passed 50½ ounces, containing 247.5 grains of urea, and about 0.2 gramme of albumin per litre. Under the milk she passed 48 ounces of urine, with 301.4 grains of urea, and about 0.1 gramme of albumin

per litre; and under the low diet she passed 48½ ounces of urine, 187.5 grains of urea, and only once a trace of albumin. She also gained weight slightly while taking the low diet.

R. M., æt. 45, a carter, was admitted to Ward xxii. on December 15, 1886, suffering from chronic inflammation of the kidneys, chiefly affecting the tubules, but probably to some extent the stroma also. The quantity of urine was about 52 ounces, of dark color, specific gravity 1018, containing 303.5 grains of urea, and albumin in the proportion of 3.2 grammes per litre. There was a considerable amount of dropsy, some tension of pulse, sclerosis of arteries, the heart was not enlarged, and there was a slight systolic murmur in the aortic area. In this case the ordinary, the milk, and the low diets were used. Under their use no difference emerged as to the amount of urine, or the specific gravity, and there was very little effect on the urea. But the albumin diminished under the milk, and continued to do so under the low diet.

It is clear that these experiments, although I may claim that they were carried out with extreme care, were far from sufficient of themselves to warrant our arriving at any general conclusion. Still they afford some support to the view generally held by the profession, that the milk diet or low diet are better suited to such cases than ordinary or ample diet.

II. CIRRHOTIC BRIGHT'S DISEASE, WITH INFLAMMATORY SUPERADDED.

S. R., æt. 40, a waiter in an hotel, was admitted to Ward xxii. on January 15, 1887, suffering from cirrhosis of the kidneys, with some degree of inflammation of the tubules superadded. He was passing at the time of his admission only 15 ounces of urine. Its specific gravity was 1036. It contained serum-albumen, globulin, and a trace of peptone, 144 grains of urea, and hyaline, granular, and fatty casts. The dietetic experiments were commenced on January 18, and he had ordinary and milk diet in succession for periods of six days respectively. No effect was discernible upon the quantity of urine or of urea, and the albuminuria was certainly not diminished by the milk diet.

III. PURE CIRRHOSIS OF THE KIDNEYS.

J. S., æt. 26, a joiner, was admitted to Ward xxii. complaining of loss of sight and headache. His case has been referred to in one of my earlier lectures, and I shall now say only that it presented all the features characteristic of renal cirrhosis. His urine was in good, although not excessive, quantity; specific gravity 1020. It contained albumin and a few casts, with about 150 grains of urea in the 24 hours. The heart was hypertrophied, the pulse firm and tense. The blood was somewhat poor in corpuseles, and the eyes showed the characteristic features of albuminuric retinitis. It was clear that the renal disease was advanced. Ordinary, large, milk, low, and egg diet were given in succession, and it was found that with the first four of these the urine remained in all respects unchanged. In trying the egg-diet, I gave eight raw eggs daily, in addition to the ordinary allowance of low diet. The quantity of urine was unaltered; its specific gravity became somewhat higher. The urea showed a decided increase during the first four days that the eggs were used, and diminished again in the later three days of the observation. The albuminuria showed a relative increase during the first two

days, and during the rest of the time the amount was about the same as it had been before the experiment commenced.

In the cases of T. M. and R. D. F., both suffering from cirrhosis of kidney, the egg-diet was carefully tried, and no material change resulted.

From these and other observations I am inclined to think that in the cirrhotic form of Bright's disease the diet is a less important element than it is in the tubular inflammation.

IV. WAXY OR AMYLOID FORM OF BRIGHT'S DISEASE.

I have not had opportunity, since entering upon the present investigation, of carrying out an elaborate and extended series of observations; but by the kindness of Dr. James Ritchie I have had opportunity of ascertaining the effect of egg-diet upon a well-marked example of this disease. The patient, a young lady, was suffering from chronic abscesses connected with vertebral disease, and had for some time exhibited the ordinary features of waxy degeneration of the kidneys. Six raw eggs were taken daily for two days in addition to her ordinary food. The urine was 120 ounces before the eggs were taken, and 100 ounces on the second day of the egg-diet. Its amount of urea was 200 grains before, and 210 grains after, thus showing a slight increase, notwithstanding the diminution of urine. The albumin was, before the eggs were used, 3.8 grammes per litre, or 199.5 grains in the 24 hours, afterwards 7.2 grammes per litre, or 315 grains in the 24 hours. This increase of albumin was very marked, and it was found not to be egg-albumen, but ordinary serum-albumen which was present.

In a doubtful case of waxy disease complicated with other renal disorders, a succession of ordinary, large, milk, and low diets were tried, and we satisfied ourselves that there was no effect upon the amount of urine, its specific gravity, or the discharge of urea. With regard to the albumin, however, it was found that the use of the large diet was attended by some increase, and the low diet gave a diminution, that suiting the patient better than the milk diet.

In waxy cases then, so far as my evidence goes, I am inclined to think that the good nourishment which is otherwise indicated in that disease is not contra-indicated by the state of the kidneys, even although their vessels appear to be in a condition permitting of more ready transudation of albumin than is the case with healthy vessels.

I shall speak more briefly of the forms of albuminuria which are, comparatively speaking, not dangerous to life. Some of them may be indeed dismissed in a few words.

In cases of *febrile* albuminuria, the question of diet is usually of little moment, but in some, and especially in scarlet fever, there is a special liability to the occurrence of actual inflammation of the kidney, and there is no doubt that the use of a copious diet, rich in nitrogenous substances, is very dangerous, but that something of the nature of low diet or milk diet is best for such fever cases during convalescence, as well as during the continuance of the fever.

The albuminuria due to *heart disease* is, as a rule, comparatively slight, and in the presence of the organic changes in the circulatory system, scarcely deserves attention.

As to the forms of albuminuria which accompany *derangement of the digestive*

system, I have elsewhere* referred to the idiosyncratic relations of some individuals to particular articles of diet. As I have made no special observations regarding these cases, I shall merely say here that albuminuria due to digestive derangements is necessarily influenced by the kind of food which produces the disturbance in each particular case, and that the effect of different diets upon the albuminuria must depend on the effect they have on the digestive derangement.

Albuminuria connected with *nervous disease* and with *glycosuria* also demands little attention in this respect. There thus remain only the functional and accidental groups for consideration.

As to the four great varieties of *functional* albuminuria—the paroxysmal, the dietetic, that due to exercise, and the simple persistent—the first requires no special notice. Of the second it is obvious that each individual case must be studied, and the diet prescribed for the patient in accordance with what may seem best to suit his individual peculiarities. In some cases referable to the third group—that of albuminuria from exercise—I have made careful trial of different kinds of food, and I do not think that much alteration was induced by it. It is true that in the case of the young lady whose case is given in detail in the article just mentioned (p. 45), there was a relative diminution of albumin when she was under the milk diet. But the diminution was merely relative; the water was increased to a large extent, but the daily discharge of albumin remained unaltered. I have had opportunity during the present summer of making observations as to the effect of diet in a case which I regard as one of simple persistent albuminuria. The patient is a young men of twenty, who is suffering from asthma, bronchitis, and backward pressure on the heart. Although his urine is always albuminous, it shows no tube-casts, and has rather an excess than a diminution of urea. He has also no evidence of the usual consecutive complications met with in true renal cases. The patient was kept upon his ordinary diet for two days. He then took for ten days ten raw eggs, in addition to other food. He was then kept upon a purely milk diet for seven days, and thereafter his ordinary diet was resumed.

The egg-diet had no effect upon the quantity of urine. There is some doubt as to the effect on the urea at first, but certainly towards the end of the period of experiment it underwent a distinct increase. The albumin also increased both relatively and absolutely, especially towards the end of the experiment. It may be worthy of mention that we examined four specimens of the water daily—one before breakfast, one after it, one in the afternoon, and one in the evening, and found that while the albumin was usually more abundant after breakfast, it was not more so than one usually finds apart from special egg-dieting, and on some days there was no increase after breakfast.

The milk diet increased the quantity of urine considerably. The urea remained as high as it had been at the end of the period during which the eggs were given, and twice it was distinctly higher. The albumin was on one day larger than on any previous occasion, but on the whole was less than it had been under the egg-diet.

During the first five days on which ordinary diet was again given, the quantity

* *Internat. Journ. of Medical Sciences*, Jan., 1887.

of urine was about the same as on the ordinary diet at first, the urea was less than under the milk and during the latter period of egg-diet, but larger than under ordinary diet at first, and during the first part of the egg-diet. The albumin showed a relative increase over what it had shown under the milk—being at least in as large a proportion as during the egg-diet, but the absolute amount lost during the 24 hours showed little difference from what it had done during the milk-diet.

From this and similar cases I am inclined to think that little is gained by very special dieting in cases of this kind, but that the physician should keep his eye upon the effect of any particular food in each individual case.

In the treatment of *accidental* albuminuria, diet is often, as most practitioners well know, of great importance. Above all, in cases of catarrhal inflammation of the urinary tract, bland and milky diet is to be recommended. I have often seen great advantage in such cases from the adoption of an exclusively milk diet. In some of the accidental cases, of course ordinary dietetic arrangements are best.

As to the use of alcoholic stimulants, I think that it is best to avoid them in all the forms of Bright's disease and in cases of inflammatory accidental albuminuria, unless when the condition of the circulation or nervous system directly requires stimulation. I have not seen alcohol prove injurious when used in moderation in circulatory albuminuria, nor in the other less dangerous groups.

IV. OBSTETRICS, DISEASES OF WOMEN AND CHILDREN.

Asafœtida in the Treatment of Habitual Abortion.

Having had his attention directed to the matter by the publication of Laferta, Cazzoni, and Giordano, NEGRI tried asafœtida in two cases of habitual abortion not attributed to syphilis or any other ascertainable cause; and successfully in both cases. Eighteen grains of the drug were given daily for a long period, and that amount was well borne.—*The Physician and Surgeon*, July, 1887.

Puerperal Neuritis.

Certain poisons have, so to speak, an elective affinity for fixed parts of the nervous system. The poison of diphtheria nearly always produces first paralysis of the palate and of the ciliary muscle, and causes abolition of the knee-jerk; syphilitic poison reflexly produces cataract, loss of knee-jerk, darting pains and disturbance of the bladder. Also, in a narrower sense, toxic paralyses have a more or less definite localization, for instance lead palsy, perhaps also alcoholic and arsenical poisoning.

After confinement and puerperal diseases, young women sometimes have symptoms of neuritis. The terminal filaments of the median or ulnar nerves, or of both, including sensory as well as motor fibres, become diseased, sometimes in both hands, more frequently in the more used right hand. The affection begins either during confinement or some weeks later, and may reach its proper development quickly, or first develop itself by sharp pains after a slow persistence of preliminary symptoms. The duration is very variable. Nearly always recovery begins sooner or later. The preceding puerperal disease may be severe or slight. MÖBIUS has seen this form of disease five times in the past year, and contributes these observations. In two other cases a different localization of the puerperal neuritis existed, once involving paralysis of several shoulder muscles and once a diffuse slight disease of the brachial plexus. Paralysis of the leg after puerperal disease Möbius has also seen, though the affected nerves in these cases seemed to have been injured by pre-existing severe inflammation of the cellular tissues.—*Schmidt's Jahrbücher*, June, 1887.

A Case of Rotheln Occuring During the Puerperium.

Dr. ALBAN KITE reports the following case in the *Boston M. & S. Jour.*, August 18, 1887: December 25, 1886, 11 p. m., saw Mrs. B., a primipara, aged seventeen, in the first stage of labor. Found os slightly dilated, pains transient. Gave one-eighth grain of sulphate of morphia subcutaneously. Delivered her December 26th, 11.15 p. m., of a male child weighing eight pounds; instrumental delivery. Forceps

on head in first position after the occiput had passed the superior strait, as there was marked uterine inertia. Within one-half hour the placenta was expressed without force and found to be intact.

December 27th. Temperature 99° F., pulse normal. Lochia and urine satisfactory.

December 28th, 10 a. m. Temperature 100° F., pulse 90, compressible. Saw the patient at 4 p. m. Temperature 105.5° F., pulse 140; delirium; slight tenesmus over abdomen; suppression of lochia. 11.30 p. m., antipyrin had reduced temperature to 103.2° F. The pulse was 120. Vaginal injections of $HgCl_2$, 1–5000, at 115° F., had been used every two hours, also flaxseed poultices over abdomen. A rectal enema had effected a copious movement of bowels.

It is unnecessary to state my fears or record my intentions. I at last decided to wait before resorting to direct uterine applications or examination.

December 28th, 8 a. m. Temperature 101° F., pulse 96. Lochia still suppressed. An examination revealed the entire body covered with an eruption of rötheln, including face and even scalp.

The lochia made their appearance on December 30th, the tenesmus remained until January 4, 1887. On January 2d, the temperature rose to 102.8° F., and then gradually fell until the normal was reached January 5th. The eruption had entirely disappeared by January 17th, and was followed by desquamation.

Mrs. B., had not left the house for three weeks prior to her accouchement, nor had there been a case of rötheln, to my knowledge, on the island for two weeks.

Aseptic precautions during and after delivery had been complied with.

Early Diagnosis of Cancer of the Uterus.

To diagnosticate cancer of the uterus at its first beginning is of the very highest importance from the therapeutic point of view of this terrible disease. Detected then, cancer can be prevented by ablation of the affected parts; if, on the contrary, infiltration of neighboring tissues has been produced, the surgeon is powerless, and palliative measures are alone to be employed. This diagnosis ought to be based partly upon rational and partly upon physical signs.

Rational signs.—Hemorrhage is the most important. In women who are still young, bleeding is early; after the menopause, on the contrary, hemorrhage is much longer delayed, and when it appears the cancerous lesions are often advanced. In every woman the frequent appearance of a ruddy or rose-colored liquid is a sign of the highest importance in the diagnosis of cancer. Fetor is less interesting, because it is often absent at the beginning of cancer, and can exist in other affections that are benign. Pain is very variable. Every cancer is painful, they say. No aphorism is more false. As long as the cancer is limited to the neck, pain is usually slight. It is when the neighboring parts are invaded that painful symptoms appear. The pain can therefore in certain cases be used for diagnosing the extent of the cancer. It is an unfortunate coincidence for the doctor, that it is when the pain appears that the patient is more inclined to an operation, while then this same operation, through extension of the disease, becomes impossible.

Physical signs.—Clinically three cases can be distinguished:

1. The existence of an infiltration, diffuse or limited to the cervix, without

ulceration. One would willingly believe it a sclerous metritis or a myoma of the cervix. Absence of ulceration and the even distribution of the induration plead against cancer, but the actual truth cannot be obtained but by a microscopic examination of a piece of the tissue.

2. The cervix is the seat of an ulceration accessible to the finger, and to the eye by means of a speculum. If ulceration rest upon an indurated base and if the borders are equally indurated, the diagnosis of cancer is undoubted. It is the induration which above all constitutes the chief element in diagnosis. Ulceration can assume other very different aspects.

3. Infiltration and ulceration occupying the most elevated portion of the cervix whose visible parts appear bloody. Here cancer can be only suspected. The diagnosis can only be established in a positive manner by dilatation of the uterine orifice after the method of Vulliet.

To the diagnosis of cancer itself must be added that of the kind and extent of the affection. The kind is of slight practical interest, as it consists of an epithelioma or carcinoma, and the prognosis does not differ in the two cases. It is different, however, with the extent of the disease. Touch, which reveals the local condition, the mobility of the uterus, and lastly, a study of the phenomena of the pain, lead us to this diagnosis.—*L' Union Médicale*, July, 1887.

Prophylaxis in the Treatment of Abortion.

Dr. JOHN W. BYERS, in *Dublin Journal of Medical Science*, July 1, 1887, says:

Our treatment of abortion by no means ends when we have cleared out the uterus (by natural or artificial means) and have got our patient up and well again. The careful and scientific obstetrician will endeavor to find out what has been the cause, in order that an abortion may be obviated should conception again occur. The most careful inquiry should be made as to any specific taint on the father's side, and treatment directed accordingly. Indeed, in such circumstances, it is well to put both parents under a course of anti-syphilitic remedies.

Is there any morbid condition of the uterus? Endometritis should be treated and displacements corrected.

Have there been any degenerative changes in the chorion or placenta? In such circumstances Sir James Simpson gave chlorate of potassium, and others have found benefit by recommending this line of treatment.

Is the mother at fault? Extreme care should be taken that she is kept free from any causes such as grief, shock, fright, which might, acting through her nervous system, cause an abortion. Fehling has recently directed attention to renal disease in the mother as a great cause of producing a cessation of pregnancy. If a patient aborts frequently, instead of contenting ourselves by saying she had acquired this habit, we should rather endeavor to find what is the acting cause. It may be a posterior displacement, syphilis, or some morbid condition of the uterine mucuous membrane.

In the case of a patient who has become pregnant again after having aborted, the greatest care should be exercised during the first four months, and especially at those times when the periods ordinarily occur, when she should be kept in bed or on the couch. She should not indulge in travelling or carriage

exercise at these times, and all strong purgatives should be avoided. Dr. Jenks (an American) recommends half to one drachm of the liquid extract of virburnum prunifolium, to be taken four times daily at the time the periods should occur, and also for two days before and after. It is not to be taken after the fourth month. In his most admirable annotations in "Smellie's Midwifery," the late Dr. M'Clintock recommends chlorate of potassium and the tincture of iron in cases where the death of the fœtus is not traceable to a syphilitic taint in either parent. He says it should be commenced some weeks before the time at which the death of the fœtus is likely to occur (as shown by the history of the woman's previous pregnancies), and be continued up to the time of labor.

In this communication I have, as a rule, brought under your notice only those methods which I have myself tested and found useful in hospital and private practice.

A Case of Brow Presentation Converted into Face; High Forceps.

Dr. EDWARD REYNOLDS reports the following case in the *Boston M. & S. Jour.*, August 4, 1887. M. S., married, native of England, II para. Labor began at 10 a. m., January 11th, but she did not send for medical assistance till 6:30 p. m., though the pains are said to have been severe all day. I was sent for first at 8:30 p. m., when the os was the size of a dollar. The brow presented, M. R. P., and was so far extended that the mouth was within the os. The fœtal heart was strong and regular, the caput large and firm. Almost all the liquor amnii had drained away. The pelvis was roomy, but a mass of about the size of an orange could be felt by external palpation in the right wall of the uterus and just above the pelvic brim; this was not reached per vaginam.

It was evident that the presence of a fibroid in the lower uterine segment and on the right side, had thrown the occiput of a head presentation O. L. A. into the opposite (left) iliac fossa, and that its detention there had produced extension so soon as the upward retraction of the fibroid permitted the descent of the chin.

Feeling that the case was likely to prove difficult, I sent for Dr. C. M. Green in consultation. On his arrival the patient was etherized and a more thorough examination made. The fibroid was entirely above the head, and the adaptation between head and pelvis was easy.

It was decided to extend the head and make a tentative application of the forceps, and failing with them to have recourse to version.

The head was easily extended to a face, M. R. P.; no rotation was attempted for fear of complicating the version, should that be necessary, and forceps were applied by Dr. Green, with the tips reversed, in the hope of promoting the fullest possible extension and consequent rotation. A few strong tractions produced no effect, the forceps were removed and version determined on.

As a preliminary, I attempted to flex the head, fearing that the prominent occiput of a face presentation might put too great a strain on the probably thin lower segment, during the passage of the hand; but finding that though the head was easily returned to its original position, any further flexion was impossible, I

re-extended it and cautiously passed the hand upward in search of the obstacle, and was surprised to find that the neck of the child was firmly grasped by a spasmodic contraction ring.

All idea of version was now abandoned, the chin was easily rotated to the front (M. R. A.) by the hand, and the forceps reapplied by Dr. Green, who succeeded in delivering, after great difficulty, an eight-pound female child. It was somewhat asphyxiated, but was resuscitated without much difficulty.

Mother and child did well, and an examination two weeks later demonstrated the presence of an intra-mural fibroid, of about the size of an English walnut, and situated just at the junction of the body and cervix. The mechanism of the case is to me most interesting; that a fibroid in the lower uterine segment should have jammed the occiput into the opposite iliac fossa, and then by its retraction have permitted extension to take place; that this extension should have delayed a normal head in a roomy pelvis until the exhausted uterus had closed down upon the neck in a constriction ring; that forceps to the face should have failed, when the chin was posterior, but succeeded after manual rotation of the chin to the front, are all points which are certainly full of practical interest.

On Uterine Discharges and Intra-Uterine Medication.

Dr. Thos. Addis Emmet, Surg. Women's Hosp., New York says: The discharges from the uterine canal, under ordinary circumstances, are due to extraneous causes, and the most common is some obstruction in the venous circulation attending an old pelvic inflammation. There is a constant tendency to resolution from the great reparative changes in tissue attending each menstrual period. Granting, as recently claimed, that at this time the whole of the epithelial surface lining the uterine canal is not removed and replaced, yet certainly a large portion is thrown off, and under such circumstances the condition termed "endometritis" could not exist but for a limited period. The most extensive erosion recognized during life cannot be found after death, as there is no loss of tissue and the tissues involved therein then become blanched, owing to the emptying of the capillaries. It is thus shown that the leakage, or over-secretion, is due to an obstructed circulation outside of the uterus. And even when the discharges seem to be due directly to an injury, as from the surfaces of a lacerated cervix, the rule still holds good. But for the septic inflammation set up at childbirth, and the continued obstruction afterwards to the circulation as a consequence, the lacerated surfaces would promptly heal soon after the reception of the injury, and no ill effects would arise. Therefore, the cervical discharges are kept up afterwards by the existing pelvic inflammation; but, as soon as the circulation can become restored to a normal state, by the disappearance of the inflammation, and by the rupture or puncture of the distended mucous follicles, all excessive secretion will cease, and the raw surfaces will rapidly heal.

Holding the views I have so long maintained in relation to the cause of the discharges from the uterine canal, it followed that I abandoned early the practice of internal applications, and I believe that I was the first to do so. During the past seven years I have not made, in ordinary practice, an application of iodine within the uterine canal, and had, to a great extent, abandoned the practice some time before. While writing the first edition of my book on "The Principles and

Practice of Gynæcology," I advocated giving up of this mode of treatment; but, by the advice of a friend, I re-wrote that portion, and expressed less decided views; being convinced that the profession was not then prepared to receive such radical teaching. Within the period specified, I have only resorted to the practice, in a few instances, for the introduction of Churchill's iodine to arrest a loss of blood, and only when, after an examination, I felt satisfied that the hemorrhage was due to granulations, or to some growth within the canal.

I may now state that I have long reached a point in practice where I avoid, if possible, the introduction of any instrument or remedy within the uterus. I have not owned a sound for years, and my uterine probe has been broken for fully eighteen months—both instruments having become useless to me since I first acquired any knowledge of bi-manual palpation. Last year in my private hospital, I obtained the average time under treatment of all the non-surgical patients admitted previous to 1879, in whom any pelvic inflammation has been detected. Then I took the average on all those treated under like circumstances, and who had been admitted since that time. I must confess that I was not prepared for the showing. It was found that the patients who had been admitted since I had abandoned the use of internal applications to the uterine canal had averaged forty-eight days, or nearly seven weeks, less time under treatment than those treated in the usual manner. Accepting the facts, the deductions to be drawn from them are significant. I can now recall clearly the condition of a number of patients who were under my care years ago, where I considered the existing pelvic inflammation as insignificant in importance as the recognized extent of the disease seemed to be. Yet these women were often under treatment year after year, and each relapse, with a fresh increase of inflammation, was then attributed to exposure to cold, or to some imprudence on the part of the patient herself, but never to the mode of treatment.

The surface of the uterine canal is, beyond question, a most ready absorber of any remedy, however applicable; but its connection, or contiguity, or sympathy with the peritoneum, is too close to make the practice safe. To abandon the intra-uterine method of treatment, and to substitute for the uterine surface, the more extended vaginal one, for the application of any agent which would be suitable for introduction within the uterus, is a positive gain. The better results obtained by me during the past six or seven years, referred to above, can only be attributed to a greater appreciation of the different shades of pelvic inflammation, and to a knowledge of their relative importance.

So far as the general principles of treatment are concerned, I know no other special change, unless it be that I now pay a closer attention to the details of general treatment, where formerly I relied much more upon local means. The chief change in local treatment has consisted in giving up, as already stated, internal medication to the uterine canal. But an advance, no less important, has been made in the more judicious and more limited use of pessaries. Consequently, there have been but few instances of lighting up again the old pelvic trouble, since the displacement of the uterus, as regards the version, has been allowed to remain unchanged until the inflammatory cause has been so far removed that the uterus has gradually returned to its natural position, or the use of a pessary has been rendered both safe and of advantage. But, while the

version is thus to remain unreduced for a time, it is necessary, throughout the course of the treatment, to correct the prolapse as far as possible, by the use of cotton-wool pledgets, saturated in glycerine. This will fully test the skill of the operator, as to the proper position of the pledgets, and as to the plane in the pelvis to which it would be safe to lift the uterus without exciting fresh inflammation, and where the circulation would be the least obstructed.

I have made, purposely, no reference as to the special form of pelvic inflammation which is supposed to exist. We have phlebitis and cellulitis, lymphangitis and peritonitis, existing alone or together. But the limit and purpose of this paper will not admit of going into details. I may, however, state that, in my observations, cellulitis seems to be the most common form of inflammation met with, and one tending to rapid recovery, if septic poisoning do not occur. But the space in the pelvis is a very limited one where a cellulitis could exist to any extent without involving, by contact, more or less of the peritoneum. In time, the inflamed connective tissue seems to disappear, as if by absorption; and, when a pelvic inflammation has been of long standing, the condition then found must necessarily be more characteristic of an old peritonitis.

The chief purpose of this paper has been to show the necessity for abandoning the use of internal medication to the uterine canal except under the conditions already specified. But to do so, it was necessary to enter somewhat into details, with the object of pointing out the pathological condition which, if admitted, renders it necessary to change a mode of practice which has consisted in treating the symptoms instead of the disease.—*Braithwaite's Retrospect*, July, 1887.

A Case of Hysterectomy for the Relief of Pyelitis from Obstruction.

A. T. Cabot, surgeon to the Massachusetts General, and to the Boston Children's Hospital, Clinical Instructor in Genito-Urinary Surgery in Harvard University, reports the following interesting case in the Boston *Medical and Surgical Journal*, June 2, 1887:

Before proceeding to the consideration of the case I have to report, I wish to allude briefly to the post-mortem examination of another case, which I saw during the last days of life, and which illustrated very well the condition to which my patient might have expected to come, had she not been relieved by operation.

In August, 1886, I saw a lady of over seventy, who had for years carried a fibroid tumor of the uterus of moderate size. Many years before, she had suffered much from it; but it had finally become quiescent, and had gradually hardened and settled down into the pelvis. She had been troubled for a long time with frequency of micturition, and about a year and a half before I saw her, after a fall, she had an acute attack of pelvic inflammation, with an aggravation of urinary symptoms.

The urine, at this time, became loaded with pus, and during the year before her death, she on several occasion passed small bits of phosphatic material. The pain in the bladder gradually increased in severity, urination became extremely frequent, with almost constant tenesmus, and she finally died in a uræmic condition, with suppression of urine.

For the notes of the autopsy, I am indebted to Dr. H. C. Ernst, who made the examination.

He found that the fibroid, which sprang from the anterior uterine wall, and weighed four and a half pounds, was almost completely calcified, and was so matted down into the pelvis by inflammatory adhesions, that it was with great difficulty that it could be dissected out, with the bladder and rectum adherent to it.

The bladder was very much contracted, and the walls thinned, evidently by pressure. It contained but a few drops of thick, ammoniacal urine.

The urethra was normal, but the ureters, in their passage over the brim of the pelvis, had been pressed upon by the uterine tumor, so that above this point they were much dilated, having the calibre, on both sides, of a very large lead pencil. Their walls were much thickened and congested, and a little pus was found in each.

The kidneys were large and soft, very dark-red in color, with their capsules extremely adherent. The pelves were much dilated, and full of masses of phosphatic material.

The secreting substance of the kidneys was diminished in amount, of a dull red color, with well-marked Malpighian corpuscles. The proportions between the medulla and cortex were but little altered.

We had here, then, an obstruction of the ureters by the pressure of a uterine fibroid, leading to chronic pyelitis, and finally, to pyelo-nephritis and death. In this case, the symptoms of obstruction to the ureters came on late in the history of the fibroid, and were possibly due to the settling of the tumor into the pelvis, and to the strong adhesions which it contracted in that position.

In the case which I have now to report, pyelitis occurred as an early symptom, while the removal of the tumor was yet possible.

Christine McL., aged twenty-five, a pale and thin young woman, was referred to me by Dr. J. E. Garland, of Gloucester, in December, 1886. She had a tumor, about the size of a child's head, occupying the lower median part of the abdomen, and projecting deep into the pelvis in Douglas's pouch. The os uteri was to be felt anteriorly, high up, and the body could be indistinctly made out behind the pubes. Above this, a little to the right of the umbilicus, was a second tumor, about as large as a small orange, somewhat movable, but seemingly attached by pedicle to the larger growth below.

In neither of these tumors could any fluctuation be detected, but over the whole anterior surface of the larger one was a layer of fluid, which the passage of a catheter showed to be in the bladder, which was flattened and pressed up against the abdominal wall.

The patient discovered the existence of a tumor about two years before, since which time its growth had been slow, but steady. At first there had not been much pain, but within the last six months she had had intermittent attacks of abdominal and pelvic pain, which were brought on usually by exertion, and incapacitated her from work.

Micturition had lately been much increased in frequency, often coming with intervals of but half an hour. The urine was alkaline, with a specific gravity of 1012. It contained considerable sediment, which consisted of pus, a little blood, bladder and vaginal epithelial cells, and triple phophate crystals.

The diagnosis was of either a fibroid, or an extremely tense, thick-walled cyst,

wedged behind the uterus. The smaller tumor above was thought to be an accessory cyst or fibroid. The condition of the urine, and the character of the micturition, was ascribed to cystitis from pressure. At my advice, she entered the Massachusetts General Hospital.

Owing to absence from the city, I did not see her again for two weeks, when, on my return, I found her in bed in a febrile condition, with evening exacerbations of temperature. She was suffering from pretty severe abdominal pain, and there was considerable tenderness, especially about the small tumor. It seeming probable that suppuration was starting in connection with one or other of the tumors, the patient was etherized, and the abdomen was opened. It was found that the large growth was a fibroid, starting from the posterior uterine wall, and firmly fixed in the pelvis, from which it could not be dislodged by any ordinary force. The smaller one was a little ovarian cyst, which, in consequence, apparently, of the pressure of the fibroid on its pedicle, was in a sloughing condition.

This cyst was removed, and, in view of the feeble, feverish state of the patient, it was thought best, in the absence of special indications, to leave the fibroid. The other ovary was sought, but was fixed so deeply in the pelvis, behind the uterine tumor, that it could not be removed. The fever now disappeared, and the patient recovered quickly from this operation.

During her stay in bed, with the aid of bladder irrigation, the urine lost its alkalinity, and the frequency of micturition came down to about what is normal. Before she was able to be up, however, she began to have pain through the left side of the back, and in the lower part of the abdomen on that side.

It was now noticed that the pus, which was quite abundant, came intermittently, so that while one passage of urine was almost clear, the next would contain perhaps half an ounce of sediment. This made it evident that the bladder must be reasonably free from inflammation, and Professor Wood now made a second thorough examination of the urine, and found evidence that chronic pyelitis was present.

The varying character of the urine showed that probably but one kidney was as yet affected, and the pain in the left side of the back pointed to that kidney as the one at fault. No enlargement of the organ could be discovered. The character of the fibroid and the way in which it pressed down into the pelvis put it almost beyond doubt that that was causing obstruction of the ureter, and consequent pyelitis.

The condition being explained to the patient, she understanding that at her age the disease could not be expected to come to a standstill or go backwards, chose the alternative of an operation for the removal of the fibroid.

This was done on March 1, 1887. An incision was made close alongside of the old cicatrix. In this, as in the former operation, considerable care was taken to avoid wounding the bladder. The tumor seemed firmly fixed in the pelvis, but rather through being wedged there, than by reason of any adhesions.

With the vigorous aid of an assistant pressing up from the vagina, it was finally dislodged and lifted out; the pedicle was constricted by the wire of an écraseur, and the mass was cut off. The body of the uterus was removed with the tumor, and only the lower part of the cervix was left. The pedicle was treated extra-peritoneally, the écraseur being left in place.

The shock of the operation was great, but the patient slowly rallied, and made a good recovery, leaving the hospital early in April. The pains in the abdomen and renal region disappeared after the operation, and the urine slowly cleared up, until, when she was last seen, it was but slightly cloudy.

The patient rapidly regained strength, and towards the end of April was talking of going to work, but a longer rest was advised.

Persistent Vomiting of Labor Arrested by Tincture of Iodine.

Dr. LLEWELLYN ELIOT, Assistant Physician Central Dispensary, Emergency Hospital, etc., Washington, D. C., reports the following results from the use of iodine in this condition: Gastric disturbance is one of the many unpleasant attendants upon the pregnant state, only a few women escaping entirely. Ordinarily the vomiting of pregnancy ceases in the earlier months, at times, to again appear toward the latter end of gestation. Now and again it is with difficulty subdued, and frequently abortion or premature labor has been induced for its relief. Dr. Thomas C. Smith,* of this city, has reported a case where abortion was performed for the relief of excessive vomiting in pregnancy. In this case the emaciation following the gastric disturbance was so great that the patient was a veritable living skeleton. Every remedy employed had failed, and as a last measure a bougie was passed into the uterus, thereby saving the life of the mother at the expense of the ovum.

Dr. John Blake White† has reported two cases of pernicious vomiting of pregnancy, occurring in the same subject, of which I make extracts: Mrs. ——, aged twenty-three, when the sixth month of utero-gestation was reached, had a slight "show," followed by slight uterine contractions and constant nausea, vomiting, and retching. The uterus was quieted, but the gastric symptoms continued unabated for ten days. Every well-known remedy for the relief of the symptoms was resorted to without any apparent benefit. That which seemed in any degree to be of service was carbolic acid, in fraction-drop doses, every half hour or hour, *pro re nata*, and an occasional morphine suppository. The advisability of inducing premature labor was being considered when the stomach became more tolerant, and in due time convalescence was established. No further trouble occurred, and she was delivered naturally at term. During the period of her second pregnancy her condition continued favorable up to the sixth month of utero-gestation, when she was again sick with distressing nausea and vomiting, but recovered from the attack without any serious consequences, and continued in fair health up to within two weeks of her expected confinement, March 19th. He was called March 12th, when she had been suffering from nausea and occasional vomiting for several days. Her nausea and retching continued throughout the night, and these symptoms assumed a very serious aspect. On March 19th, when the patient's condition appeared to be rapidly becoming critical, and the induction of labor seemed to be decidedly the proper course to pursue, natural labor set in and resulted in a still-birth. The third stage was rapidly and satisfactorily accomplished; the womb afterward contracted firmly, and it was hoped

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*Smith, Thomas C., *Amer. Jour. Obstet.*, June, 1886, vol. xix.

†White, John Blake: *New York Med. Jour.*, August 7, 1886, vol. xliv., p. 154.

that the persistent retching would cease after the seemingly exciting cause had been removed. The retching soon returned with increased energy, and, with the vomiting, continued, in spite of every means to control these symptoms, until evening, when the hemorrhagic character of the vomit became manifest. The symptoms persisted until death from asthenia supervened, twenty-four hours after confinement. There was no septicæmic influence to account for the malignancy of the symptoms.

Sometimes vomiting attends labor, but it causes trouble in but a few isolated cases, where, from its persistency, exhaustion becomes so great that the contractions of the uterus become too feeble to complete the labor. The cases recited show the little value attached to the remedies usually employed, and the benefit to be derived from the internal administration of tincture of iodine. According to the teaching of Wood, iodine, when taken internally in moderate doses, causes "some gastric uneasiness and a disagreeable metallic taste in the mouth; when larger amounts are ingested, the gastric uneasiness may be intensified into violent vomiting, with increased salivary flow, abdominal pains, and sometimes purging."* He also states, in regard to the internal administration of iodine: "Nor should the tincture be given internally, because the iodine is precipitated by the watery juices of the stomach;"† but advises the use of the compound solution of iodine in doses of five to fifteen drops. The *rationale* of its action, in the class of cases to which reference is made, I do not attempt to explain; the fact remains the same nevertheless.

The United States Dispensatory‡ states: "The tincture of iodine is not eligible for internal use;" and further,§ "the dose of the tincture is from five to fifteen drops, but Lugol's solution is a much preferable preparation for the internal administration of iodine."

Bartholow‖ states: "The vomiting of pregnancy can sometimes be greatly relieved by drop-doses, every hour or two, of the tincture."

Potter¶ writes: "But it is generally used as a local application or for injection into cavities;" and further,** "and in the vomiting of pregnancy drop-doses of the tincture every hour are often efficient."

Brunton†† writes: "On account of its irritating action on the intestinal mucous membrane, iodine is rarely given internally."

Farquharson‡‡ does not mention its internal use, nor does Gubb.§§

The first recorded experience of the use of iodine in gastric disturbances which I have met with is by Dr. Thomas J. Gaunt,‖‖ who relates a series of successful experiences with the compound tincture, under the title of "The Use of Iodine

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* Wood: Therap. Mat. Med. and Toxicol., p. 411.

† Ibid., p. 415.

‡ U. S. Dispensatory, fifteenth edition, 809.

§ Ibid., p. 1461.

‖ Bartholow: Prac. Treat. on Mater. Med. and Therap., p. 219.

¶ Potter: Handbook Mater. Med., Pharmacy, and Therap., p. 231.

** Ibid., p. 234.

†† Brunton: Text-book Pharmacol., Therap., and Mater. Med., p. 559.

‡‡ Farquharson: Guide to Therap. and Mater. Med., edition of 1879.

§§ Gubb: Griffith's Mater. Med. and Pharmacy.

‖‖ Gaunt, Thomas J., *Amer. Jour. Med. Sc.*, April, 1883, p. 413.

as a Stomachic Sedative." He gave it in doses of from three to five drops. I have frequently obtained the same beneficial results which he reported, in cases of the morning-sickness of drunkards. If for any reason the compound tincture cannot readily be obtained, the simple tincture will answer equally as well.

M——, white, aged twenty-six, born in the District of Columbia, went into labor with her first child, March 2d, at 2 a. m. Her previous history was negative, if we except the usual vomiting attending the earlier months of her gestation. When called at 3.30 a. m., the os was dilating, vagina moist, head presenting, membranes intact, but she was vomiting persistently. Previous to my arrival she had been given lime-water, pepsine, brandy, ingluvin, and cerium oxalate, without benefit. Mustard was ordered over the pit of the stomach, and cerium oxalate combined with ingluvin given without success. Carbolic acid in half-drop doses failed, as did lactopeptine. She was becoming rapidly exhausted and the pains had ceased. Whether to administer chloral hydrate per rectum, or to administer an anæsthetic and so terminate the labor, were questions to be weighed, when the iodine treatment came to mind. Following the advice of Dr. H. B. Hemenway,* in protracted labors—"Posture during Labor"—she was propped up in bed, hoping thereby to precipitate the labor, at the same time the finger being introduced and pressed against the anterior lip of the cervix; contractions of a feeble character followed, still the vomiting continued. At this juncture she was given five drops of tincture of iodine in a tablespoonful of sweetened water; the effect was magical, for the vomiting ceased almost immediately. To make assurance doubly sure, she was given a second dose in thirty minutes. The labor now progressed rapidly, and at five o'clock, three hours after the first pains, she was delivered of a male child, well developed and healthy. Third stage normal. No bad effects followed the use of the iodine. While Dr. H. B. Hemenway is credited with the postural treatment of protracted labors, the idea was not new, as I have seen it mentioned briefly in obstetric works; but I think the credit of developing the idea belongs to him.

Dr. Samuel C. Busey, of this city, read before the Medical Society of the District of Columbia, at a recent meeting, a paper on "Persistent Vomiting during Labor relieved by Anæsthesia." In this case success followed the use of the alcohol, chloroform, and ether mixture, but it was necessary to continue the administration to the end of labor, as the vomiting recurred upon the suspension of the anæsthetic. In the report of remarks made, it appears that "the tincture of iodine finally controlled the vomiting, but the pains ceased." This is a mistake, as the labor progressed to a rapid end after the arrest of the vomiting, as appears above. Dr. L. Mackall referred to the good effects of administering a cupful of crushed ice, swallowed as rapidly as possible; he had by this means allayed gastric irritability as well as promoted efficient uterine contractions and prompt delivery in such cases.

The use of anæsthetics to lessen the pains in labor, I fancy, is a prolific cause of post-partum hemorrhage, since there is want of discretion and care in their use; but if the first insensibility were the limit of their action they would be far safer. The safest plan is self-administration. The treatment here recited will be of service in cases of vomiting of pregnancy, that following a debauch, and

*Hemenway, H. B., *Amer. Jour. Obstet.*, June, 1886, vol. xix., p. 575.

almost any variety of vomiting, and as an agent so potent for good deserves a fair trial.—*The Medical Record*, September 24, 1887.

Enteric Fever in a Girl at the Age of Puberty; Death at the End of the First Week from Intercurrent Fulminant Peritonitis of Pelvic Origin.

Dr. J. C. Wilson, of Philadelphia, has the following interesting account of this case in the *Archives of Pediatrics*, July, 1887:

Typical enteric fever—the classical typhoid of the text-books—is often seen in early adult-life; but variations from this type, more or less widely aberrant forms, are quite as common. At the extremes of the age of greatest liability, namely, in early and in advanced life, the typical forms rarely occur, and it is only by the light of knowledge derived from pathological anatomy that infantile remittent and endemic adynamic fever of aged persons have come to be recognized as belonging to the general group of the forms of enteric fever. Broadly generalized descriptions are necessary for purposes of instruction, but they are misleading in practice. No dictum of authority has created more confusion at the bedside than the famous "typical temperature-curve of enteric fever" of Wunderlich. I do not hesitate to say that this curve is much less frequently met with than variations from it. Departures from the type in the infectious diseases may be due to variations in the intensity of the infection, the degree of exposure, the stage of the epidemic, the susceptibility of the individual, his general ability to withstand morbid influences, his previous state of health, and the like; or they may be due to declared constitutional or visceral disease, intercurrent maladies, and complications. It occasionally happens that the departure from the type is so wide that, in the absence of the pattern set by other cases, as in local or house-epidemics, the clinical diagnosis is impossible. Such a case is the one I am about to describe. Its publication appears to be warranted equally as illustrating the impossibility of bedside diagnosis in the early stages of certain cases of enteric fever, and a rare, perhaps unique, association of morbid conditions in a child.

A. W. R., a large, precociously-developed girl, eleven years and eight months old, came under my observation for the first time in her last illness on the morning of April 24, 1887. She had been from infancy a remarkably healthy child, and had escaped to a great extent the ordinary ailments of childhood. During the past winter she had been somewhat languid at times, more easily fatigued than before, had suffered from occasional headache and pain in the back. It was observed also that her abdomen was at times larger than usual, so that her ordinary loosely-fitting clothing became uncomfortably tight. These symptoms were not severe enough to occasion uneasiness on the part of her mother, and she was kept at school. At the beginning of March she menstruated for the first time. The discharge was said to have been unaccompanied by pain, normal in appearance, and rather free in quantity. It continued about five days. As it ceased there was a good deal of headache, not localized, some nausea, loss of appetite, and general malaise. I saw her at this time, and prescribed sodium bromide, a simple diet, longer hours of rest in bed, shorter hours at school, and measures to secure greater regularity of the bowels than existed. There was at this time

neither pain nor tenderness in the pelvic region. Four weeks later the catamenia again appeared, as before painlessly. On this occasion the quantity was slight, and the duration only two days, but the patient seemed to be weaker than before, and suffered from the symptoms already described. From this time she continued to be weak and languid, complained of more or less continuous headache, and went to school irregularly. Two weeks from this second period a very abundant flow set in and continued for nearly a week. Upon its subsidence, leucorrhœa, a symptom not before observed, was noticed.

On April 14 she "took cold," complained of sore throat, was treated by household remedies, and in two or three days was again able to go to school. Headache, worse towards night, was thenceforth present, and it was observed for the first time—on the fifth day before I saw her and the sixth before her death—that she was feverish. She was, nevertheless, not regarded by the family as ill, and was allowed to go about the house.

Sunday, April 24, her mother having administered a small dose of castor oil the evening before, she was suddenly seized before daybreak with violent pains in the lower part of the abdomen upon the left side, nausea, vomiting of greenish fluid, frequent watery diarrhœa, and great restlessness and agitation. So far as I could learn, there was no chill. I found her, some hours later, very restless and excited, constantly vomiting and retching, thirst urgent, tongue dry and red, abdomen moderately distended and very tender. The region of greatest tenderness corresponded to the seat of greatest pain—namely, just above Poupart's ligament on the left side. Both pain and tenderness were less marked in the ileo-cæcal region than at any other point. Pulse 140, small and feeble; respirations 40, shallow; temperature 103° Fahrenheit; features pinched, expression haggard. Small amounts of urine have been voided with the stools and involuntarily in the bed. Under the influence of morphine, hypodermically, she rallied slightly, became more quiet, and after a time was able to retain small quantities of iced brandy. Light flaxseed poultices were applied, and one grain of the aqueous extract of opium in suppository given every third or fourth hour, according to her condition. After some time she was able to take at long intervals tablespoonful doses of iced milk and lime-water, equal parts. In other respects her condition remained unchanged. The evening temperature reached 104° Fahrenheit.

The following morning, April 25, the temperature was the same; the pulse was now very feeble and thready; extremities cool; mind wandering; there had been a little light sleep in snatches. During the morning of Monday the patient had a severe, prolonged, general convulsion, followed by copious vomiting of fluid resembling coffee-grounds, and at five p. m., thirty-six hours from the onset of pain, she died.

Necropsy, fifteen hours after death, performed by Dr. A. H. P. Leuf.—The body was well nourished and almost fully developed. It appeared to belong to a person of about seventeen or eighteen years of age. The complexion was dark. Pubic hair was abundant, mammæ developed. Abdomen was distended and tympanitic. The omentum was perfect, covering all the viscera below the transverse colon, and enveloping them on either side. Its small vessels were well injected, as were also those of the abdominal walls. The injection was most marked be-

low. The omentum was adherent to the fundus and back of the uterus, to the left Fallopian tube, and the sigmoid flexure and upper end of the rectum. The mesentery was injected, as were also the small intestines. It contained many enlarged lymphatic glands of firm consistence. Some were fully two centimetres in length. Greenish-yellow pus was found in moderate quantity in the bottom of the pelvis. Both ovaries, Fallopian tubes, and infundibulæ, with fimbriated extremities, were intensely congested and markedly œdematous. The left was worse than the right. They were deep purple in color, and parts of the left tube looked as though they would soon have become gangrenous. The peritonitis extended up as high as the diaphragm, being perihepatic and perisplenic. Both ovaries were soft, slightly larger than normal, and multicystic. The small intestines contained yellowish muco-pus, and showed marked enlargement of its lymphoid follicles. Throughout its whole extent the solitary glands were easily discernible. Beginning in the lower part of the duodenum the agminated glands showed a decided increase in size. They were mostly very pale, but here and there showed marked injection. In the lower part of the ileum a few had begun to ulcerate, and also some of the solitary glands. At ileo-cæcal valve there were several round ulcerations and one irregularly-shaped one, due to a coalescence of some round ones.

The spleen was enlarged and soft in consistence. The bladder was empty, about eight ounces of slightly albuminous urine having been withdrawn by catheterization an hour before death. There were no lesions of the vagina or external genitalia.

Aside from the peritonitis, which was the immediate cause of death, there were two sets of lesions: first, those of an acute double salpingitis, which was the point of departure of the peritoneal inflammation, and, second, those of enteric fever at the beginning of the stage of ulceration—namely, at the end of the first week or early in the second week.

These two sets of anatomical changes correspond accurately with the history of the case. Precocious sexual development, early, irregular menstruation, pelvic pains, leucorrhœa, irregular headaches, and increasing lassitude, on the one hand, are conditions which indicated at first irritability, then positive disease of the pelvic organs; while, on the other hand, for some days before the final illness there had been observed the symptoms of an insidiously developing infective process—namely, persistent headache aggravated towards night, loss of appetite, general malaise, increasing fever.

The obvious diagnosis of acute explosive peritonitis was less important as influencing treatment than the recognition of its cause. In view of the clinical history as obtained when I was consulted, the possibility of latent or walking enteric fever with intestinal perforation at once suggested itself. Perforation is most common later in the course of the disease, during the third, fourth, or fifth week. But Pennock mentions a case in which this accident happened on the eighth day; Murchison one in the London Fever Hospital in which it occurred on the ninth day; Goodridge one on the eleventh, and Louis one on the twelfth day. Murchison states that peritonitis may arise in consequence of propagation of inflammation from the mucous to the serous coat by continuity, without perforation, before ulceration has commenced, and even during the first week of the

disease. Peritonitis thus caused is, I believe, rarely, if indeed ever, attended by that degree of intensity *at the onset* which my case presented.

As against enteric fever with perforation were the following facts: absence of epistaxis, of rose-spots, of dilatation of the pupils, of diarrhœa. The enlargement of the spleen, which was suspected from percussion, could not well be made out on account of the tympany and tenderness. Furthermore, there was less pain and less tenderness in the right iliac fossa than elsewhere, and these symptoms had their point of greatest intensity on the left side just above Poupart's ligament. This fact in itself gave color to the suspicion, likewise fully warranted by the previous history of the patient, that the peritonitis might have originated in some lesion of the pelvic viscera.

Between these two views, which were laid before the friends of the patient, it was impossible to decide.

The question of the propriety of performing laparotomy was fully discussed with Professor D. Hayes Agnew, who kindly saw the case in consultation with me. It was decided in the negative in view of the uncertainty of the cause of the peritonitis, the possibility of the coexistence of enteric fever with some pelvic trouble (as proved to be the case), and finally, because of the intensity of the symptoms and the evidences of profound constitutional disturbance, from which there was no tendency to reaction.

*On the Reparative Treatment of Some of the Graver Forms of Vesico-Vaginal Fistula.**

Dr. Thomas More Madden's paper is reported as follows in the Dublin *Medical Journal*, May, 1887: Notwithstanding the great advance of modern gynæcology, in no respect better shown than in the operative procedures by which vaginal fistulæ have been so generally rendered amenable to reparative treatment, the management of such cases in some exceptional instances still presents one of the most difficult problems that may occur in our special line of practice.

On the present occasion I do not purpose to refer to the ordinary forms of vaginal fistula consequent on parturition, and which are now less frequently met with as well as more amenable to ordinary operative treatment than was formerly the case. I shall, therefore, now confine myself to those graver as well as more exceptional cases in which more difficult procedures must be resorted to.

These cases may, I think, be roughly divided into two categories — first, those which, although some considerable loss of tisssue has resulted from sloughing of the vesico-vaginal walls, are capable of repair by measures having for their object the bringing together and maintaining in apposition the separated parts until firmly consolidated by adhesive inflammation. In the second class may be included all cases in which the loss of substance or the position and character of the rupture are such as to preclude the restoration of the former structural integrity of the parts, and where either by plastic operation new vesico-vaginal or vesico-uterine walls must be built up, or else a new condition of the injured parts must be established.

With regard to the first class of cases, or where some degree of sloughing has

* Read before the Obstetrical Section of the Academy of Medicine in Ireland, Friday, April 1, 1887.

followed long compression from delay in the second stage of labor, the main trouble in the operative treatment consists in keeping together the surfaces included in the sutures until they become united by new connective tissue, and in overcoming or preventing the disturbing influence of the retractile tension occasioned by the muscular structures of the vesico-vaginal walls, and the tendency to separation occasioned by their natural mobility. I need not here refer to the various mechanical expedients which have been designed for this purpose, as they are probably well known to the Academy; and, moreover, in the majority of instances, they are either unnecessary or useless, as their object may be generally accomplished by the division of any specially tense bands, or by merely nicking these at short intervals with the scalpel so as to allow them free expansion. In some few instances, however, I have found it necessary to employ the little instrument now shown, which is merely a modification of the late Mr. Baker-Brown's bar-splint for the purpose of lessening the tension of the sutures, and so hold the edges of the wound securely together.

Vesico-Uterine Fistulæ, if of less frequent occurrence, are obviously of greater importance and present much greater difficulties in their reparative treatment than those already referred to. In the comparatively exceptional cases of this kind that have come under my notice in hospital, in almost every instance the patient had been delivered instrumentally. Moreover, they most commonly occur in patients who have had a number of children, and who consequently have the abdominal parietes relaxed and the uterine walls softened and disintegrated by imperfect involution. In some instances they originate in lacerations of the cervix, extending thence across the roof of the anterior vaginal *cul-de-sac* into the bladder. And in such cases it is obvious that, even should the cervical laceration be healed over from below in the ordinary way, a fistulous communication would still remain above between the bladder and the uterine cavity or cervical canal, which must be subsequently dealt with.

Under these circumstances, therefore, we must either resort to trachelorrhaphy in the first instance, followed by a plastic operation on the vesico-uterine rent, or close the os uteri, so as to convert this organ into an appendix to the bladder, through which the patient will afterwards menstruate, or else obtain a similar result by turning the cervix into the vesical cavity by the operation recommended by Dr. Goodell in some cases of this kind, which may be accomplished by denuding a portion of the cervical surface and uniting it to the vivified free edge of the fistulous opening. As a rule, neither of the latter operations should be resorted to whenever the former can be successfully performed, as their result should apparently be to render the patient capable of future gestation. In one remarkable case of this kind, however, in which Dr. Goodell's operation was anticipated by the late Dr. M'Clintock, the normal aperture of the uterus being thus closed, nevertheles, the patient afterwards again became pregnant, as it would appear, through the urethra.

In cases of complete destruction of the anterior wall of the vagina, involving the entire vesico-vaginal septum from the urethra to the base of the bladder, gynæcologists were formerly content to palliate the miserable condition of the patient by mechanical contrivances, such as a well-adjusted urinal belt. Recent experience has, however, demonstrated the feasibility of affording com-

plete relief from the incontinence of urine in such cases by denuding the internal labial surfaces, and then closing them by sutures, so as to leave only a small aperture for the passage of urine, which can, if necessary, be controlled by a properly-adjusted spring trap or pad, and which, as will be seen by the following case, may not even require this. The advisability of such an operation in any instance is, however, another and very difficult question, and most certainly it should never be undertaken without absolute necessity and after full consideration of all the possible consequences of converting the vaginal canal into a receptacle for urine—a condition entirely foreign to its physiological purpose, and one liable to be productive of grave ulterior results.

The objections to this operation have been very forcibly urged by one of the most eminent modern authorities on the subject; and as one of the objects of the present communication is to bring forward a case where I succeeded in relieving an otherwise incurable patient by the procedure thus condemned, I shall here, in the first place, recapitulate Dr. Emmet's views on this point. "There exists," he says, "no greater malpractice than the procedure which, we are told, was practised by that great master, the late Prof. Simon, of Heidelberg. He never seemed to appreciate the importance of the principle which I am now endeavoring to impress upon the reader. Without hesitation he would shut up the vagina when difficulties presented themselves in bringing together the edges of a fistula, as if the sole object was to give a retentive power regardless of the consequences. From my own observation I have learned that it is but a question of a few months, a year, or possibly two, before serious consequences must arise after leaving a receptacle, like a portion of the vagina, in which the urine may stagnate. To give a retentive power for so short a time is not a sufficient compensation for the suffering and consequences which supervene. As the result of my experience, I would urge that the operation should never be resorted to under any circumstances. The maximum has now been reduced to two or three per cent. of cases where the resources of the surgeon cannot overcome all the difficulties which may be presented in closing a vesico-vaginal fistula. Something more may be accomplished in the future; but, at present, these incurable cases are better without the retentive power when gained by Simon's method. The surgeon endeavors to cause the parts to heal thoroughly, and educate the patient in the art of taking care of herself, and in this way much can be done to render her condition a comfortable one."

Whenever the destruction of tissues has been so extensive as to permit the inverted bladder, filled with intestines, to protrude from the labia in an almost strangulated condition, some surgical relief is imperative. In such cases I do not hesitate, with the consent of the husband, to unite the sides of the vagina at any point within the canal at which I can gain the needed support for the bladder. This is done to relieve the suffering attendant upon the prolapsed bladder, and it is very effectual. But I always leave an opening at the most dependent portion, and one above, so that the urine cannot accumulate, and the parts may at any time be washed out if necessary. After the surfaces have all healed, and the woman has learned to keep herself free from excoriations, her health will remain good, and the escape of urine will be comparatively but a slight inconvenience. Certainly no comparison can be drawn between the comfort of one with

retentive power at the cost of cystitis and its consequences, and the other in a healthy condition, with the urine escaping into a cloth or some other suitable receptacle.

I go further than Dr. Emmet, and would say that it should, moreover, not be forgotten in this connection that in some instances vesico-vaginal fistulæ of large extent may possibly be cured spontaneously or without any operative interference. I myself am cognizant of two such cases, in which the patients, in early life, had each suffered parturient laceration of the vesico-vaginal walls, and for many years subsequently endured the incontinence of urine and other discomforts consequent thereon. In both cases, in the course of time, these patients by the occurrence of senile atresia of the vagina at last became perfectly freed from any trace of the accident, the effects of which had rendered miserable the better part of their long lives. Such cases are, however, far too exceptional to have much practical influence in determining the adoption or non-adoption of any available plan of treatment in cases of vesico-vaginal fistula, such as the following. In this instance the ordinary method of treatment failed; and as the operation employed, although, perhaps, neither original in its conception nor approved by the highest authority, was successful, and is not often, if ever, here resorted to, I have thought its details might be worth bringing before the Academy.

Case.—K. B., aged forty, widow, six children, sent in by Dr. O'Brien, Johnstown Bridge; admitted November 12th, suffering from vesico-vaginal fistula and laceration of cervix of four years' standing. She was in a wretchedly cachectic state; her thighs and nates raw and excoriated by the constant urinary dribble, and thickly encrusted with sabulous deposit. The history of the case, as well as it could be ascertained—as she was an extremely stupid woman—was that until the birth of her last child she had enjoyed good health. Her labor was very protracted, extending, according to her own account, over sixty-nine hours, but she had no assistance beyond that of a neighborly "handy woman." She states that the incontinence of urine was first noticed the day after delivery, but became much worse when she arose from bed, six days later, and had since continued. She sought no advice, however, until a month before admission, when she consulted Dr. O'Brien, by whom she was sent up to hospital. On examination the cervix was found extensively lacerated bilaterally, the rent extending from the anterior lip of the vaginal roof and down through the septum, and involving the entire base of the bladder. There was considerable loss of substance, apparently from sloughing. A few days after admission an attempt was made to close this large opening, in the usual manner; and with great difficulty, owing to the loss of tissue, its vivified edges were brought together. Unfortunately, however, although some union took place in the lower part of the wound, no substantial benefit followed this operation; and, hence, considering that under the existing local circumstances and general condition of the patient, any further effort in the same direction would be equally unavailing, when she again returned (three months later) I resolved on trying a modification of Simon's operation for closing the vaginal aperture so as to form a new receptacle for the urine. With this view a superficial incision was cautiously made, extending elliptically through the vaginal mucous membrane from above the meatus anteriorly round the canal

to its posterior commissure behind the nymphæ, and thence dissected off the subjacent structures and removed, so as to leave an extensive raw surface. A great deal of venous hæmorrhage took place during this, which was arrested by hot water and turpentine, whilst a few small spouting arterial branches were twisted or ligatured. When all hemorrhage had been thus arrested, the denuded surfaces were brought together by silver wire sutures, so as to completely close the passage from the vaginal orifice upwards. The vulva was sealed with aseptic dressing, leaving merely an opening for the retaining catheter, and secured by a pad and a bandage. On the next day she complained a good deal of pain and soreness, which was relieved by opiates, but beyond this her recovery was uninterrupted, the temperature never rising above 100°. The catheter, being a railroad one, was changed and cleaned daily, without disturbing the dressing, until the eighth day, when the sutures were removed and the parts found united. Her bowels were then cleared by an enema, the vulval dressing replaced, and the catheter continued for another week, at the end of which it was finally withdrawn, and she was then found to have complete retentive power in the recumbent position, though when standing there was still a slight dribble from the dilated urethra, which gradually lessened, and after leaving the hospital I heard that she had no vestige of this trouble, from which she remained free until her death, from fever, eighteen months later.

In conclusion I may repeat that, whilst regarding my modification of Simon's operation for closure of the vagina merely as a *dernier ressort*, to be adopted only in the treatment of some exceptional cases of vesico-vaginal fistula otherwise incurable, nevertheless the procedure appears to me to deserve some consideration in such cases. I yield to no one in my respect for Dr. Emmet's authority on this subject, but I would not myself be deterred even by his condemnation from again reverting in any similar instance to the operation by which I benefited the patient whose case has just been related. Whether any renal disease, such as Dr. Emmet insists on as the consequence of Simon's operation, supervened in my case or not, I have no data to say. I only know that a patient whose condition had for years previously been as miserable as any that could well befall a woman, and who to the best of my opinion was otherwise incurable, was by the operation described restored to a state of comfort and apparent health (which lasted for at least some time) subsequently.

The Treatment of Mastitis.

Dr. CHARLES J. WRIGHT, M. R. C. S., surgeon to the hospital for women and children at Leeds, and lecturer on Midwifery at the Yorkshire College, writes as follows in the *Brit. Med. Journal*, July 23, 1887: My object is to direct attention to the beneficial effects of pressure in the treatment of milk-engorgement and ordinary inflammatory diseases of the breast.

In cases of painful lactation and puerperal mastitis, where the breast is swollen and indurated—whether suppuration threaten or not—we have been accustomed to direct that the mammary gland should be raised and supported by a suspensory bandage or handkerchief. Strapping with ordinary adhesive—or sometimes lead or belladonna—plaster has been practised both before and after suppuration, to the great comfort of the patient; but I doubt whether we have hitherto real-

ized the benefit derived from a firm and equable pressure by a carefully-adjusted bandage placed over the opposite shoulder and round the chest, so as not only to support, but to uniformly compress, the mammary gland, or that we have sufficiently profited by the results of this practice systematically carried out. The comfort to the patient is immense; and, whether suppuration take place or not, the treatment may be continued up to the moment that the pus is evacuated, and from that time until the part is well.

Dr. G. Ranney, of Michigan, U. S., in a paper read before the Section of Obstetric Medicine at the Brighton meeting of the British Medical Association, drew attention to the good results of the pressure treatment; and I bring it before this Society, as the method I advocate does not receive much, if any, notice in the English or American text-books.

The following cases will illustrate the points to which I wish to direct attention.

Case 1.—Mrs. ——, aged 43, was delivered of her eighth child, after a natural labor, on October 3d. She made a good recovery, and I paid my last visit on October 18th. She had suckled all her children but two, one of which was stillborn. With her fourth child the milk failed her; this time there was from the first a good supply.

October 27th, the twenty-fourth day after delivery, I found the right breast hard, hot, and tender. A belladonna lotion was applied, the gland was slung up after being emptied with the breast glass, and the child cut off from it, and allowed to take from the other just sufficient to prevent it getting too full.

On October 31st, finding it difficult to support the breast with comfort, I proceeded as follows:—Having laid on a piece of lint moistened with belladonna lotion, and padded the breast with wadding, I took a calico roller, four inches wide and six yards long, and wrapped it firmly and evenly round the chest and over the opposite shoulder, alternately fixing the folds with safety pins as I proceeded, thus getting an uniform pressure over the whole of the affected mammary gland. The comfort was very marked and immediate, and it was no less interesting than remarkable to notice that deep finger pressure on any one spot gave acute pain, but immense relief was experienced on uniformly applying firm pressure with the bandage. The right arm was kept as much as possible in a sling, but not bandaged to the side. This process was repeated daily for the next five days, the nipple being drawn slightly by an exhausting glass on each occasion.

On the sixth day of the application, finding fluctuation, I made an opening near the areola, under the carbolic spray, and let out about one ounce of pus. A drainage-tube was inserted, covered by a dressing of warm moistened sublimated wood-wool wadding, and a flannel bandage applied as before. This dressing was changed under spray on the second, fourth, seventh, and eleventh days after the opening was made, the part each time being firmly bandaged. No more pus exuded, and on the fourth dressing the abscess was completely healed. A piece of Gamgee tissue, powdered with iodoform, was placed over the nipple, and the pressure treatment continued. As the other breast contained much milk, and the patient was anxious to nurse, the child was allowed to use it. This caused a little difficulty in applying the bandage, as it had to be fixed with safety pins, chiefly round one side, so as to avoid constricting the actively secreting gland.

For two days I tried a broad elastic bandage, and, although, it was a great comfort to the inflamed organ, it pressed too much on the active one, and had to be discontinued. As some thickening and hardness remained a month after the pus was evacuated, some firm strapping was applied in addition to the bandage. A continuation of this treatment cleared up the case. Some milk exuded from the nipple of the affected breast at each dressing, and it still (March, 1887) oozes at intervals, but it has not been deemed safe to resume the nursing with it.

Case II.—An unmarried girl, aged 17, came to my out-patient room at the hospital on December 14th. Six weeks previously she was struck by a friend in play with the back of the hand over the right breast, which on admission was large, hard, and tender, feeling boggy, as if about to suppurate, on the outer side and near the nipple. She was taken in and put to bed, and a long, soft double napkin bound round both breasts, and firmly fixed with safety-pins. Two days afterwards the broad flannel roller was applied, and changed every few days. The temperature, which was 102.6° F. upon admission, came down to normal on the third day of the treatment. At first I hoped that we should avoid suppuration; but the temperature again rose, and I had eventually to make an opening, nearly four weeks after admission, and evacuated a large quantity of pus. This case is now well, after somewhat prolonged drainage, combined with bandaging or strapping throughout.

It was, however, worthy of note that in this case the pressure was such a comfort to the patient that it rather masked the condition when suppuration had actually taken place. It is, therefore, essential to be more especially on the watch for fluctuation where pain is practically in abeyance.

I have found this method of great use in other cases of painful breasts—1, in which a lady tried to nurse her child, but failed to have milk enough; 2, where milk was present in the breasts, but the mother was unwilling to persevere with lactation; 3, in a case of persistent mammary pain after abortion at two months; 4, in a patient who had reasons for not nursing a first child, though the milk was plentiful and the breasts very full and tender. In these cases the napkin fastened with pins was sufficient, and the tighter it was drawn the greater was the comfort to the patient. In the latter case, plasters were also used; but in future I shall endeavor to dispense with them in cases of simple suppression of lactation. It seems as if the pressure upon the acini and lactiferous ducts prevents, or at all events limits, secretion and accumulation in the gland, and encourages the absorption of inflammatory products, limiting considerably the area of suppuration when this takes place, and favoring the healing process after evacuation. The relief experienced in all my cases was most marked.

I have also tried the pressure treatment in other painful conditions of the puerperium; for example, in a case of severe perimetritic pain occurring within a week of delivery, where there was undoubtedly some peritonitis, pressure carefully applied over a poultice with a pad of wadding over the most tender ovarian region gave decided relief.

It is now, I hope, unnecessary to dwell upon the advantages of opening mammary abscess antiseptically, the great saving in time, trouble, suffering, and cleanliness, to both patient and nurse, admitting, I think, of no question; a small Siegle's steam-spray or hand-spray is sufficient if the ordinary apparatus is not

available; and Sir Joseph Lister has described a plan by which antiseptic precautions may be maintained without even using any spray.

Further experience will define the cases to which the pressure treatment is inapplicable; but at least in the cases I have noted it is pleasant to contemplate the difference between pressure with comfort and Listerism, with rapid recovery on the one hand, and the troublesome discomfort of slings and prolonged poulticing, with discharge for weeks or months, and the sinuses and re-formed abscesses healing with ugly scars, the result of the older treatment.

Sudden Death in Labor and Childbed.

Dr. FAYETTE DUNLAP, in a paper read before the American Medical Association, June, 1887, says: On January 14, 1887, I was summoned to attend a lady, aged 24 years, in her first confinement. I had been engaged some months before, and by reference to my visiting book I found that she was expected to be confined on January 27th. The note summoning me stated that there had been a slight hæmorrhage from the vagina for several hours, and that a premature delivery was imminent. An examination proved that labor had begun, and the os was dilated to an extent to admit the index finger. There were no distinct contractions, but the os was slowly dilating, and very satisfactorily. The hæmorrhage continued constant but scanty. I ordered a warm vaginal douche, left the house, and returned after four hours. There had been some progress made, the parts were splendidly lubricated, the pains coming on periodically and increasing in force; in a few words, the labor was progressing naturally.

I retired to an adjoining room at 10 p. m., with instructions to be called at 2 a. m. At this hour my patient was sleepless, suffering acutely, and the expulsive efforts very feeble, whereupon I gave hypodermically $\frac{1}{6}$ gr. morphia and $\frac{1}{150}$ gr. atropia. She slept quietly for a short time, and by 7 a. m. the contractions began in earnest. From the beginning of labor the suffering was acute, yet the woman showed no evidence of exhaustion, and was very hopeful of a satisfactory issue out of her confinement. I gave 30 gr. of chloral *per rectum*, as the rim of the os was very sharp and unyielding, and the parts becoming dry. I could not perceive that it had the least effect locally or constitutionally, and repeated the hot water douche at 11 a. m.

At 1 p. m. the delivery was completed, and the woman seemingly in unusually good condition, considering the number of hours she had been the victim of acute suffering. At no time was there the slightest despondency or evidence that her nervous system was influenced by it. The perineum relaxed well, and there was no more than the customary amount of laceration for first labors. The placenta was expelled without traction or great amount of compression, and it is absolutely certain that there was no bleeding of consequence. I gave my patient my undivided attention for twenty minutes or more, and, save a pulse-beat of about 100 and very great prostration, there were no unfavorable symptoms. She had not moved from her position, and was breathing tranquilly.

I was preparing to leave the room when she asked me to return, as she felt as if about to faint. I instantly thrust my hand into the vagina, expecting hæmorrhage, but found the womb firmly contracted and plainly to be outlined above the pubes. Dyspnœa, nausea and a turbulent tossing about in bed began. The

second sound of the heart was lost, and the organ in a flutter and not to be counted. I grasped the shoulders and lowered the head almost to the floor, and in a few seconds consciousness returned, and with an improved tone of the heart-beat. I replaced her quietly in bed, and gave one ounce of brandy and had the body warmed. At this juncture I despatched a messenger for a consultant, and in a few minutes Dr. McMurtry arrived. As the heart's action was feeble and the countenance livid, I gave every few minutes brandy hypodermatically for an hour.

The tone of the heart's beat would improve and remain strong a few moments at a time, and would then gradually fade away and syncope would again follow. The dyspnœa continued, the cyanosis was alarming, and the surface was shrunken and freely perspiring. Precisely four hours after the first syncopic seizure the woman suddenly lifted herself in bed, uttered a faint scream, and fell back dead. Her mind was clear up to the moment of death.

In prefacing my remarks upon this case it may be well to state that is my custom to make an analysis of the urine of my pregnant patients, usually about one month before confinement. As there was considerable œdema of the ankles, I examined the urine three times microscopically and chemically. She was a strong, robust, hopeful person, and had a remarkably fine family history.

This sad tragedy, the first one that I had witnessed, made a deep impression upon me, and I repaired at once to all the obstetric literature at my command for some explanation of this unexpected occurrence. The very meagre amount to be found in even the most popular and practical works was a matter of surprise. Leishman gives about one-fourth of a page, and simply says that very rarely a patient suddenly dies in childbed from some unknown cause, such as shock, heart-failure or exhaustion. Playfair gives something more; Cazeaux and Ramsbotham and Parvin, nothing at all. It remains for Lusk, who had an experience similar to my own just prior to giving his work to the press, to give especial attention to this subject. A few weeks ago I reported this case to the Medical Society of my village, and nearly every practitioner had had one or more lying-in women suddenly die with the assemblage of symptoms above related. A calamity of this kind, if taking place only once on an average in the professional life of every general practitioner, deserves more attention than has been given to it.

This, and a like experience to be related hereafter, brought the matter prominently forward in my studies. In prefacing his remarks upon the class of cases to which this history belongs, Winckel says: "He who has once seen a puerperal woman happy and joyous in the expectation of soon leaving her couch, then directly afterwards has found her a corpse, will be able to comprehend the truth of Hervieux's words: 'In the twinkling of an eye all the calculations of prudence are set at naught; the most untiring vigilance, the best established rules of hygiene, all the varied resources and ingenious combinations of therapeutics, are shattered against an invisible rock;'" then adds with a tone of despondency: "The only thing which remains for the physician after such a depressing occurrence is to seek out the cause of the sudden death."

In this search it is my purpose to pass over consideration of rupture of the uterus, apoplexy, the snapping asunder of an aneurism and post-partum hæmor-

rhage, and following the example of Lusk, confine myself to entrance of air into the veins, shock, exhaustion and embolism.

The surgeons have taught us that the entrance of air into the venous circulation is fraught with danger. This accident is most likely to occur in opening the veins of the neck, the act of inspiration encouraging the entrance of a volume of air into the open venous mouths. The sudden emptying of the womb produces a like result, and it is plainly to be understood how air can find its way into the open veins of the placental site. This is particularly true in cases in which the labor has been unduly prolonged and the uterus left in a relaxed condition. It has frequently happened that sudden death has occurred before delivery was accomplished, this being due to the fact that a partial separation of the placenta has left the venous sinuses standing widely open. The plan of inducing premature delivery recommended by Kiwisch, then, is particularly perilous.

I can recall the particular features of a case in my practice which seems to illustrate the dangers from this source: I placed my patient in the Sims position, introduced the speculum in order to remove a four months' fœtus that was firmly held by the rim of the os uteri. I grasped the mass with the placental forceps, and easily dislodged it. After removing the secundines with the forceps I introduced the nozzle of a Davidson's syringe and forced in a stream of water to clear the womb of clots and débris generally. Pure, very warm water only was used. The os seemed sufficiently relaxed to allow an unobstructed return of the water thrown in. While this was in progress the woman began to breathe heavily, spoke in a whisper, and became cyanotic. She felt as if a heavy weight was bearing her down. The effort to breathe was violent, and she breathed more rapidly than I thought it possible for an adult to do. The heart was beating tumultuously, but strong enough. I used brandy freely, hypodermatically, and even ventured upon giving 20 drops of liq. ammon. in one syringeful. After lying a few minutes in a relaxed and semi-unconscious state, she slowly revived and made a prompt recovery. Sir James Paget tells us that it is possible for a considerable amount of air to enter the circulation, and if it is properly disposed through the lungs it will be speedily absorbed and do no damage. I have always believed that the sudden and firm contraction of the uterus caught above the internal os a volume of air that had been forced in by the syringe, and it found its readiest exit by way of the venous sinuses. My father, who was holding the speculum, remarked that the symptoms presented an exact counterpart to those in a man dying on the operating table from the entrance of air while undergoing an operation for exsection of a portion of rib.

Lusk quotes an interesting case reported by Kezmansky, of Budapest. The patient was 36 years of age, and in labor for the fourth time. An excessive amount of fluid was recognized. The patient entered the hospital at 10 a. m. At 3 p. m. she lay upon her left side, and the bag of waters protruding from the vulva. Spontaneous rupture occurred and a gallon of water escaped. Five minutes later the patient suddenly threw back her head, gasped a few times for air, the face became livid, and respiration was arrested. In scarcely two minutes Dr. Liebman was at her side, but the pulse was extinct. The forceps were applied and an asphyxiated child was delivered. The heart was feebly beating, and the woman died before delivery was completed. At the post-mortem examination,

twenty hours after, pale reddish-brown blood, mingled with bubbles of air, was found in the uterine veins, vena cava, lungs, and especially in the pulmonary artery. In the vena cava, columns of blood and air alternated. Kezmansky makes the following statement in his report: "The patient lay upon her left side with her knees drawn up in nearly the Sims position, with the vulva elevated above the concavity of the abdomen. As the membranes ruptured there was a sudden diminution of the intra-abdominal pressure, so that the air entered through the open vulva between the collapsed membranes and the uterus. The ensuing retraction of the uterus forced the head to the os externum, and caused the placental separation. The next contraction caused the uterine air to escape by the only channel that was possible, viz.: by the open mouths of the placental veins."

In the *St. George's Hospital Reports*, vol. vi, Cordment reports two cases. From the position of the patients at the time of delivery it was an easy matter for air to gain admission. Post-mortem examination demonstrated that the larger veins in both the abdominal and thoracic viscera had bubbles of air in them, and in the right side of the heart. The brain was anæmic, and contained frothy serum. In addition to these symptoms was the extreme pallor of the surface, feeble pulse, jerky and rapid respiration, and speedy collapse.

It is thus demonstrated that Kiwisch's plan of inducing premature labor by the forced stream of water; that to admit a sudden volume of air into the womb while the sinuses are open; to allow the woman to be delivered in the standing position; to deliver her in the knee-chest position, as suggested by Ludwig under certain contingencies, are dangerous in the extreme. In my case I can never be certain that air in the veins was the cause of the alarming condition, but I shall always believe so. The sudden onset of the symptoms, their sudden disappearance, and the favorable position of the patient, are the only evidences I have to offer to sustain my belief.

I now turn to a consideration of shock or exhaustion as a cause of sudden death in childbed. The phenomena of surgical shock are typically illustrated in the case reported at the beginning of this paper, and are almost exactly reproduced in a case within the last month. I was hastily called in consultation by Dr. McMurtry, who had an hour previously delivered his patient of her seventh child. She was 42 years of age, very robust, and an illustration of perfect health. By overtaxing her strength in household duties labor was induced two or three hours in advance of maturity. Labor came on rather precipitately, but aside from this, it was completed without an untoward symptom. She informed her attendant that in her last confinement the hæmorrhage was alarmingly profuse. Immediately after the expulsion of the fœtus, and before the placenta had been detached, Dr. McMurtry noticed the pallor of countenance and the complete relaxation of the whole muscular system. The heart was beating rapidly; could not be counted, and the second sound was obliterated. The patient lay quietly, breathed easily, and presented a typical picture of surgical shock. A noticeable feature was the very marked improvement at times of the tone of the circulation, and its sudden recession within a few seconds' time. There were no convulsions, no loss of blood, and the only complaint was that of præcordial distress. Dyspnœa came on gradually, and in exactly five hours from delivery she quietly passed away. This was an almost exact reproduction of my first experience,

and differed only in this, that in the first patient restlessness and great distress were prominent, and in the second they were not present at all.

In the absence of any demonstrable evidence of the presence of air in the veins or of embolism, we must attribute death to that mysterious complexus of symptoms we include in the general term of *shock*. Pathological investigation refers the phenomena of shock to a reflex paralysis of the vaso-motor or splanchnic nerves, whereby the mass of the blood recedes from the surface and collects in the thoracic or abdominal viscera. Through this same influence the heart is enfeebled, and soon overworked by its ineffectual efforts at ridding itself of its constantly increasing burden, and finally yields to the pressure and ceases to contract. The condition is favorable to coagulation, and doubtless this often occurs.

In addition to the pains and exhaustion of child-birth, mental emotions have no small part in the production of a state of the nervous system favorable to shock. The patient had been for a year brooding over a domestic tragedy, and made frequent visits to the State Prison to see her son, who was undergoing a sentence for murder. She was greatly humiliated, lost sleep, and was ready at all times to give way to the most wretched despondency. How great a part this circumstance had in bringing about the calamity we are unable to say. Lusk tells us that the homesick prisoner of war and the conquered soldier who is left on the field of battle yield with readiness to shock and perish from the most trivial wounds. We cannot ignore these facts, and must give prominent place in our classification to that at present unexplainable something we call shock.

Unless the case reported at the beginning as an introduction was one of embolism, I have never encountered the accident in my midwifery practice. As an autopsy was denied, the diagnosis is made solely upon the symptoms above detailed, and moreover, I cannot find a single report of an embolus having been discovered in an autopsy of a patient dying during or immediately after delivery.

It has been assumed for a number of years that the blood is in a favorable state for coagulation during pregnancy. This theory has been strongly maintained by Barker, Playfair, Meigs and others, and in clinical experience many striking facts have arisen to support this belief. Dr. Mary Putnam Jacobi reported a case similar to my first one to the New York Pathological Society, and exhibited the heart containing the clots, which she maintained were post-mortem.

In all the cases reported the feeble circulation was always the first symptom to cause alarm, and if coagulation takes place it is the result of this enfeebled circulation, and not its cause. The fact remains that numbers of puerpuræ die and with symptoms as detailed above in these three cases. While there is great similarity in them, yet they are widely apart in many important particulars.

Now, it is not sound pathology to ignore these facts and to banish as unworthy of consideration a well established pathological condition, simply because in the days of ignorance the terms exhaustion and shock were indiscriminately employed to explain a multitude of cases which, with our present enlightenment, we know are due to the entrance of air into the circulation, and to pulmonary embolism. As the nervous organization of woman loses in powers of resistance as the penalty of a higher civilization and of artificial refinement, it becomes imperatively necessary for the physician to guard her from the dangers of excessive and too prolonged suffering. I have always urged the principle, and have carried

it out in practice, that the exquisite torture to which many women are subjected is unnecessary. The impression made upon a sensitive organization by prolonged and constantly increasing pain, can and does result in damage to the central nervous system.

In a measure, then, we can diminish the liability to danger from shock and exhaustion by timely and judicious interference, the danger from entrance of air into the circulation by the position of the patient, the means employed in assisting uterine dilatation; but in the prevention of clot formation, in the light of our present pathological knowledge, we are powerless, and in the presence of either of these conditions we must stand helplessly by and say with Winckel, that the only thing remaining for the physician to do is to seek out the cause of death.—*Journal Am. Med. Assoc.*, September 10, 1887.

Note on a Case of Dystocia from Dorsal Displacement of the Arm.

Dr. A. H. Freeland Barbour, M. D., F. R. C. P. E., Lecturer on Midwifery and Diseases of Women in the School of Medicine, Edinburgh, etc., read before the Edinburgh Obstetrical Society, 25th of May, 1887, the following paper:

Cases of dystocia from this cause are so very rare that the following one is worthy of record.

I was sent for to a patient in connection with the Fountainbridge Dispensary, with a message that she was a multipara, and had been in labor for more than twelve hours without any progress. On examining the case, I found the following condition.

Abdominal Palpation.—The head of the child was still at the brim; the uterus contracted on it, but no pains present; the fœtal heart was weak and heard to the right side.

On *vaginal examination* the os was dilated; membranes ruptured; head high, transverse, with occiput to the right, and both fontanelles on a level.

I should have mentioned that the waters had broken eight hours previously; and that the pains, which were strong then, had died away. It was a case, then, of uterine inertia, with the head for some reason or other not engaging, and the question was what to do—whether to put on forceps, or turn. I discussed the question with the students who had charge of the case, and said that as the head was partially extended that was a reason for turning; and that the best rule to follow in interfering was to imitate the natural mechanism, and, when the head was extended, deliver by turning, because turning brought through the head extended while forceps brought it flexed. On the other hand, that this had probably begun as a right occipito-posterior case, one of the accidents of which is to have deficient flexion and consequent jamming in the transverse diameter, which was a case for forceps. Further, as the waters had escaped for some time, it was a bad case for turning: and so the scale turned in favor of forceps.

I should have mentioned that I examined the pelvis carefully and found no rickety contraction; and that on sweeping my finger round the child's head, I felt nothing abnormal.

In putting on the forceps, I had very great difficulty in getting them on the high head, and could not get the handles to meet in locking. Extraction was ex-

tremely difficult, and the delivery with forceps took fully three-quarters of an hour. I was very glad when I saw the head through the vulva. The cause of the difficulty in locking the forceps and in extraction was now evident. The head was large, the forceps gripped it right antero-posteriorly, and the head had come through the pelvis extended without budging an inch in the grip of the forceps.

I thought that *the* difficulty of the case was now over, when really it was just beginning. The shoulders wouldn't come through. I pulled on the head till I was afraid it would come off, while one of the students made supra-pubic pressure. Then, as I thought he was not doing this properly, I told him to make traction on the head, while I jumped upon the bed and tried to push the breech through. I then slipped up my finger to feel what the obstruction was, and, if possible, to pull down the arms. I made out the one arm lying across the breast of the child, which with some difficulty I pulled down; but at first I could not get the other, and the reason was that it was bent back, thrown over the shoulder, and lay along the back. I tried in every way to slide it down, but it was so jammed that I had to break it, and after an hour got the child delivered dead, patient having been under chloroform for nearly two hours.

I have no data for saying what the original position of the arm was, but I take it to have been, in the first place, a case of dorsal displacement such as Sir James Y. Simpson figures—the arm extended, but the forearm flexed at a right angle and lying across the back of the neck; and that while the head was being forcibly pulled through by the forceps, the elbow caught in the brim, so that the arm was pushed across the child's back.

In commenting on this case, I draw attention to these points: *first*, that I did not diagnose the malposition of the arm, although I examined the case carefully before putting on the forceps; and, *second*, that I believe I should have fared better if I had stuck to the rule of imitating the natural mechanism, and turned.

There is no evident cause for the extension, as one would have imagined that the arm in the back of the neck would have favored rather than retarded flexion. I notice that in the interesting case which Professor Simpson has recorded, the child's head lay right occipito-anterior, but it is not said whether it was extended or flexed.

For the literature of this subject I would only refer to Sir James Simpson's classical paper,* and to Professor Simpson's more recent communication † where the subsequent literature is fully given. Dr. Milne Murray ‡ has also recorded still more recently an interesting case in which the dorsal displacement of both arms was a cause of difficulty; and Dr. Hewetson ‖ has also communicated a case to our *Transactions.*—*Edin. Med. Journ.*, September, 1887.

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* "New Form of Obstruction in Head Presentations from Posterior Displacement of the Arm:" *Selected Obstetrical Works.*

† "On Dystocia with Dorsal Displacement of the Arm:" *Edin. Med. Jour.*, vol. xxiv., p. 961; *Transactions of the Edin. Obstet. Society*, vol. v., p. 97; and *Obstetrics and Gynæcology*, p. 180.

‡ *Edin. Obstet. Trans.*, vol. vii.

‖ "Notes on a Case of Face Presentation with Peculiar Attitude of the Fœtus:" *Edin. Obstet. Trans.*, vol. x.,

Sclerema.

Dr. J. LINDSAY PORTEOUS, M. D., F. R. C. S. Ed., writes as follows in the *Edin. Med. Jour.*, September, 1887:

A case of the above very rare disease came under my notice a short time ago. The child was four days old when I was called to see it. The parents first remarked that the skin seemed peculiar at the end of the second day after birth. When I saw it, it presented the following appearance: The legs, feet, arms, hands, back of shoulders, and upper part of chest, had the feeling of india-rubber when stretched across a frame. The color varied from deep purple to light pink. It cried feebly, and stretched its body to its full extent, as if struggling for breath, or trying to escape from something. The pulse was 120, and temperature 97° (in mouth). I carefully examined the chest, but found neither pulmonic nor cardiac sounds abnormal.

The bowels had moved shortly after birth, but not again. Castor oil had been given three times, also soap injections, but the bowels did not again move.

Hot water baths were given, friction also tried. Cotton wool enveloped it, and a good temperature was maintained in the room. I made several punctures in the skin with the view of releasing any fluid that might be there, but only a very little blood and yellowish fluid escaped. On the sixth day the temperature fell to 87°, and it died the same evening.

Note.—According to Valliex the pulse generally falls to about 60 in the minute. In this case it never was below 110.

Ellis, in his *Diseases of Children*, says some authors consider the cause of this disease to be lobular pneumonia or atelectasis pulmonum, and that after a time cough comes on and continues throughout. Now in this case there was very little cough, which entirely disappeared on the fifth day after birth, or third day after disease was noticed. Again, I do not find in any account of the disease that persistent constipation has been given as a symptom. I am inclined to venture the opinion that the disease is entirely confined to the cellular tissue, and that when the lungs are affected it is purely accidental, and has nothing whatever to do with the sclerema. If I am fortunate enough to have another case under treatment, I shall try the absorbing power of iodine, but I fear that the rapid progress of the disease would not give the iodine time to act.

V. SURGERY.

Aspiration of the Stomach in Drunkenness.

In the *Dublin Journal of Medical Science*, Mr. GEORGE FOY relates the following case: One night in November, 1884, he was called to a man reported to be dying. He had taken a large quantity of whiskey and claret, and for two hours his drunken companions had been trying to rouse him, but had totally failed. When seen he was quite insensible; extremities cold, face livid, pupils widely dilated, respiration and pulse almost imperceptible. Treatment was commenced by opening the median-basilic vein of the left arm, when, by rubbing the forearm briskly, the blood gradually flowed until sixteen ounces were drawn off. In the meantime the fine trocar of an aspirator was pushed through the abdominal wall in an upward, backward, and outward direction, just at the sternal end of the eighth rib. The cannula was attached by the ordinary method to an exhaust bottle, and on turning the cock a stream of claret-colored fluid flowed into the bottle. Very soon the heart commenced to beat; the pulse was readily felt at the wrist, respiration recommenced. The cannula was then withdrawn, and a stomach-pump was used to wash out the stomach. Very soon the man was able to speak, and soon recovered. The author saw no good in giving apomorphia in this case, as it has no emetic action when sensibility is quite deadened, while the respiration was too feeble to allow a stomach-tube to be introduced; so that there seemed no chance for the patient unless aspiration was attempted.—*Med. Record*, July 23, 1887.

Stone in the Kidney Treated by Manipulation.

In the *Lancet* for May 21st, Mr. WM. H. BENNETT gives the case of an unmarried woman of 30, somewhat hysterical, whose symptoms pointed to a calculus in the left kidney. As drugs afforded no relief, and the kidney could be distinctly felt and moved—due partly to the thinness of the patient—the author determined to attempt to disturb the stone, with the possible hope of its passage. As an anæsthetic was declined, the operation was attempted without it. The patient having been laid upon her back, the fingers of the operator's left hand were dipped deeply into the abdominal wall over the kidney, the right hand being pressed forward into the loin. The muscles being quite flaccid from the patient having become faint, the kidney could be felt quite easily between the two hands, and was kneaded as thoroughly as the circumstances allowed. The patient complained of pain and tenderness after the operation, but was able to walk away. Two days later she reappeared, saying that, having suffered much discomfort for the rest of the day after the manipulation, she was seized as she was going to bed with a most acute pain in the affected loin and side of the ab-

domen. The pain lasted for a half hour, during which she vomited twice. All at once an uncontrollable desire to micturate occurred, the pain immediately ceased, and did not recur. In this case there was no positive evidence of a calculus having passed, but in the case of one of the colleagues of the writer a very small calculus was passed shortly after a negative examination of the kidney had been made.—*N. Y. Med. Abs.*, June, 1887.

Irrigation of the Pleural Cavity, in Empyema, Through the Aspirator-Needle.

Dr. J. P. ESCH, of Huron, O., writes: "In the article on 'The Surgical Management of Empyema,' by Robert Abbe, M. D., in your issue of May 28, 1887, I notice the following statement: 'It was long ago proposed to irrigate the cavity through the aspirator-needle with antiseptic solutions, but there is no literature to show that the results are good, and the method does not appeal strongly to practical operators.' In view of the above I venture to give my experience in this direction, which has caused me to form a different opinion. About four years ago I attended a boy, about eight years old, who had empyema in the right side. The first time I aspirated I drew out about twelve ounces of pus. Temporary improvement followed, but the cavity filled up again and I aspirated again, and repeated this operation seven times in the course of a few weeks, withdrawing each time from eight to fourteen ounces of pus. The boy had chills meanwhile, the temperature ranging from 102° to 104° F., and the pulse kept from 120 to 144 beats per minute. I had about made up my mind to make a free incision and insert a drainage-tube, but concluded to irrigate, and after carefully withdrawing every drop of pus I could get with the aspirator-needle, I injected a two per cent. solution of biborate of soda, using about eight ounces. I left the solution in the cavity for five or ten minutes, meanwhile changing the boy's position slightly several times, so as to bring the solution in contact with every part of the cavity, and then withdrew every drop of it as nearly as possible. The cavity did not fill up again after that, and the boy made a rapid recovery, and to-day is as strong and robust as any body of his age. I have since then used the biborate solution in various cases, and always with the happiest results. In one case of hydrocele I had to repeat the operation, and I then increased the strength of the solution to three per cent. Aside from the fact that the results were so much more favorable than I ever obtained with any other method, the operation is almost painless, and in cases of hydrocele I attend to the patients in my office, allowing the patients to go home afterward, simply wearing a suspensory bandage."—*The Med. Record*, July 30, 1887.

Iodoform as an Antiseptic.

Dr. W. A. STEWART says: A rather acrimonious contest has been going on in the German medical journals as to the value of iodoform as an antiseptic. Up to the present time iodoform has been extensively used in surgery with brilliant results, and it is rather staggering to find that after all perhaps it is altogether inert in its action on germs. A few, but they are very few, have had grave doubts as to its powers as a germicide; most surgeons believed in it; therefore, when Heyn and Rovsing (in *Fortschritte der Medicin*,

No. 2, 1887), declared from direct experimental evidence that it was utterly useless as a germicide, that it was no antiseptic, the conclusion generally arrived at was that Heyn and Rovsing were probably mistaken. After some dispute, and the use of some unparliamentary language, it was established beyond doubt that *outside* the body, fifty per cent. of iodoform did not interfere with the growth of all kinds of germs. Still the surgical results were brilliant, and the explanation might be that the iodoform was so affected by the living tissues that the iodine was set free, and iodine is a known germicide. We know that oil or ether can dissolve iodoform, and set free its iodine under the influence of light, and it is supposable at least that the living tissues exercise similar powers without requiring the assistance of light. We know the iodoform is broken up by the tissues, as iodine compounds are found in the urine of surgical cases when iodoform is used, and iodine poisoning also occurs in such cases.

It would absorb too much space to give anything like a readable abstract of the discussion. On the whole, the unbelievers in iodoform as a germicide seem to have the best of it. They have gained one point, namely, that the powder is inert outside the body, and they have now to prove that it is also inert inside the body. To prove this is attempted by Rovsing in *Fortschritte der Medicin*, No. 9, 1887, May 1st; and it may be of some interest to give an abstract of his method and results. He experiments with tubercle, and the site of experiment is the anterior chamber of the rabbit's eye. A small bit of tubercle is kneaded some time in iodoform (Dr. Salomonsen being the kneader in this case), a slit is made in the cornea, and the tiny mass of tubercle and iodoform introduced at the slit. The mass is manœuvred on to the iris as far as possible from the preliminary slit. Every care is employed to disinfect all the instruments used, and to see that nothing enters the anterior chamber save the tubercle and iodoform. The germ and iodoform are thus in contact with the living tissues, exposed to the light; and, after the slight iritis caused by the wound has disappeared (and this happens in a few days), the behavior of the tubercle can be clearly seen. The usual course is as follows: For two, three, or four weeks there is generally nothing abnormal, but after that, dry red hyperæmic patches are visible on the iris, and in these, tiny grey spots which are miliary tubercles. Day by day the hyperæmia increases, the tubercles increase, become yellowish, and fresh tubercles appear. All this is accompanied by a keratitis, more or less violent as the tubercle growth is more or less swift. This finally covers the eye with a red curtain, and prevents further observation. In the post-mortem, one or two months later, the eyes are found to be shrivelled, soft, and quite full of masses of tubercle in a cheesy state. Miliary tubercle will also be found in all the neighboring organs. This is also the course of tubercle introduced without iodoform, the addition of iodoform only rendering the process more rapid. In his experiments, Rovsing used five rabbits. His results are dead against the value of iodoform as an antiseptic. They are as follows: (1) The inoculation of a small mass of tubercle, kneaded along with a considerable quantity of iodoform, was in all cases followed by local tuberculosis which, in its turn, was followed by general tuberculosis. (2) The outbreak of local tuberculosis seems to be in no wise weakened by the iodoform—on the contrary, in two cases in which at the same time one

eye received pure tubercle and the other iodoformed tubercle, the tubercle appeared first in the iodoformed eye, and the same eye was first destroyed. This rapid action is probably due, he considers, to the iodoform irritating the tissues, and thus preparing a favorable soil for the growth of tubercle. He considers his experiments give iodoform every chance to exert its powers. If it is powerless under these favorable conditions where it is directly introduced along with the tubercle, it can, he argues, have no effect when rubbed into or strewn on a tissue in which tubercle has already obtained a footing.

In the case of tubercle he attributes the brilliant surgical results to the careful surgical treatment—the complete removal of the tubercle—and not to the virtue of iodoform.

He does not believe that tubercular meningitis can be cured by rubbing iodoform into the scalp. Partly dissolved in oil it might reach the lymphatics of the scalp, but these do not lead to the brain, but to the glands of the head and neck. Again, if the iodoform did reach the base of the brain, it would be as iodine combined with alkalies and other things, and iodide of potassium would therefore prove as effectual.—*Medical Chronicle*, July, 1887.

On the Suture of Nerves after Section.

Professor Reclus, of Paris, France, says: A considerable obscurity exists still in regard to the anatomical and functional modifications that take place in a nerve that has been sectioned by accident and then sutured. What takes place when it has been joined and healed? Well, notwithstanding twenty years of patient observation by experimental physiological scientists, they do not yet accord with our practical surgical experience. You all know that the experiments made by Vulpian, Ranvier, and Tripier, on the section and regeneration of nerves, seem to show that when a nerve has been cut in man, after the fourth or fifth day it loses all its peculiar properties. It would seem that the essential element of the nerve, the axis cylinder, was destroyed.

An old observation of Béclard's seemed, however, to plead in favor of the regeneration of nerves, at least in man, and Richet, in 1867, made a suture, and found to his surprise that the sensibility returned in all the parts animated by the nerve (median). Tripier explained that this was owing to recurrent sensibility; but most surgeons thought that this was only so in very young animals. In 1883, Richelot, however, declared that suturing a nerve would not bring about its regeneration; if the sensibility persisted after section, it was owing to some of the smaller side fibres having been preserved. But Chaput, in 1884, brought forward some sixty-six cases in which there had been a complete section of the nerves, and in suturing them at least two-thirds recovered all the sensibility of the parts to which the nerves in question were distributed.

M. Segond gives the following late case: A woman of twenty-five entered the hospital, having two hours before fallen on the stairs of her house, breaking a milk-pot, which cut her arm just above the wrist deep enough to section completely all the anterior tendons and ulnar artery and nerve, and the median nerve. On examination, all the parts of the hand and fingers to which these nerves are distributed were in a state of complete anæsthesia. She could not feel a needle prick, nor even a hot stylet held on the hand, while pinching the upper parts of

the tract of the nerve, above the wound, the sensation was normal, being more painful than usual. At once, without even waiting to give chloroform, the nerves were brought together by a suture of fine catgut, which brought them in contact, and the wound was dressed. In ten minutes afterwards the sensation had returned in the hands and fingers, and since it seems to be perfectly normal; but according to physiological science this cannot be explained, unless they consent to change their theories. So that practical surgery proves that sensibility and motility do return after the suture of the nerves that have been cut.

But let us now pass on to two late cases that will go farther. One, a girl of twenty-three, meets with an accident and cuts the median nerve, and four months afterwards she has still an insensibility of the palmar side of the thumb, of the index finger, and the next one, and a part of the palm, the muscles on this side are atrophied, and the movements of the thumb on the hand are abolished. The patient insisted on having some operation performed to relieve her, and M. Tilleaux opened the tract of the median nerve, and took up the cut ends of the nerve, finding the central end swollen, while the other end was drawn out fine. They were both trimmed with a bistoury, and a needle with a Florence suture was passed through the ends, and they were drawn together; the thread was cut short, and left in the wound. All the usual antiseptic precautions were taken, the arm kept quiet and steady. In two days afterwards the patient felt a throbbing in the fingers, and the next day she could feel a needle when it was applied to the formerly insensible parts; some two weeks after, she was quite well, and in six weeks all the usual normal sensibility had returned, so that she could do needle-work. The second operation was made on a woman of twenty-eight, who was in just the same state, except that she had been so *for fourteen years.* During this time there had been a complete loss of sensibility, and she had been told that nothing could be done for her. The suture was made as in the first case, and with as complete success. M. Polaillon has just detailed another case where the sensibility returned after suture in five hours.

These facts strike hard against the notions that we all acquired in physiology, that the regeneration of nerves was not possible, either in primitive or secondary cases; and our best physiologists say that when the immediate reunion was observed, it was only the fibrous elements of the nerve that adhered, and that the axis cylinder, which is the essential element of conductibility, never adheres again to the other part of a cylinder axis from which it may be divided, so that any regeneration is only explained by a long theory that it takes many months to accomplish; but the immediate reunion and return of sensibility are not admitted, notwithstanding the clinical facts we bring to prove it.

The secondary cases are also as difficult to explain by physiology; but whatever reason is given to explain these facts does not prevent us from taking advantage of them, so that whenever a nerve is divided, our duty is to at once proceed to suture it by a delicate Florence suture, or a fine catgut one. Then prevent all suppuration and formation of nodules of fibrous tissue, as they will prevent the functions of the nerve being again brought into action, and they will also press on the cicatrix. Even if the first suture should fail, we should again open the wound and renew it, or make another one, as Tilleaux did in one of his cases, meeting with success after the second operation.—*The Physician and Surgeon*, July, 1887.

A Case of Acute Spreading Gangrene, resulting in Recovery after Amputation in the Middle Third of the Thigh.

Brigade-Surgeon C. H. Y. Godwin, M. S., Assistant Professor of Military Surgery, Royal Victoria Hospital, Netley, reports the following case in the *Brit. Med. Jour.*, July 23, 1887:

Private W. H., aged 35, sought admission into hospital on March 27, 1887, on account of feeling ill, and having a swollen foot. He walked in, but required assistance, and gave the following history: On the afternoon of March 24, he had felt pain in the left instep, had a rigor, and felt generally ill. He nursed himself until March 27, when he felt so bad that he was obliged to go to hospital. He had been in fair health lately, but some years ago he acquired ague in the West Indies, and has been liable to attacks of it occasionally since. He is very abstemious in his habits, and could not account for his illness. Some three or four months ago a corn on the ball of the little toe gave him trouble; he picked it with his fingers; it inflamed, and a little discharge followed, but this had all healed some time ago. On admission he looked gravely ill, had a high temperature (104.6° F.), quick pulse, dry brown tongue, and was very weak; the left foot was swollen, and over the distal end of the fifth metatarsal bone a black slough was seen. A probe when introduced passed at once into a cavity extending to the plantar surface of the foot, over which was seen the indurated cuticle of a large corn; a foul, fetid odor came from the part. The cavity was opened up and end syringed out with iodine water, iodoform sprinkled over the part, which was dressed with wood-wool and sal alembroth wool. In the evening the foot was more swollen on the outer side, and the skin in parts, when touched, gave the crackling of emphysema, in the deeper tissues. A free incision was made through the skin, when some dirty, fetid, purulent fluid escaped; but the mass of tissue looked to be dead. The whole wound was now washed out with 1 in 2,000 solution of corrosive sublimate, and dressed with the sal alembroth wool. Ordered two grains of opium, also an ammonia and bark mixture, and as much milk and beef tea as he could take.

March 28th. He continued very ill; the skin over the foot had bullæ, which contained dark sanious fluid; the smell was most offensive; the same dressings were continued.

March 29th. There were more bullæ on the skin of the foot; the fifth metatarso-phalangeal joint was quite bare, and the bones composing it looked to be dead. The œdema had extended up towards the external malleolus; on touching the skin the same crackling feeling of emphysema was noticed; but the skin was in no sense brawny. Another incision was now made into this emphysematous tissue, when the same dirty, stinking fluid escaped, and dead connective tissue was exposed. The opium was continued, but the ammonia was stopped, as he thought it to be the cause of his vomiting; the urine contained albumin.

March 30th. The œdema had extended up the leg; the skin looked white and tense, with many blue distended veins; there were more bullæ on the skin of the leg; a plantar artery gave way during the dressing. As it was quite evident that it was a case of acute spreading gangrene, amputation high up in the lower third of the thigh was performed by long anterior and short posterior skin-flaps. On dissecting up the posterior flap, a streak of gelatinous infiltration was seen,

which was scraped away, and a portion of skin removed; the wound was washed with 1 in 2,000 sublimate solution, and closed in the usual manner. He was then removed to a fresh ward, with everything clean and fresh about him.

March 31st. Temperature 97°, pulse 80. Bowels moved three times; tongue becoming moister; had a most profuse sweat; no rigor.

April 1st. Temperature 97.6°, pulse 80. Bowels moved three times; no return of sweating; dressing changed, wound looking well; no smell; quinine gr. v, twice daily, with milk, beef-tea, brandy, and eggs.

April 2d. Patient very drowsy; subsultus tendinum; inclined to pick the bedclothes; bowels moved five times; slept badly; urine passed into the bed; wound quite healthy; no tension.

April 3d. General condition improved; eyes brighter; no subsultus; bowels open four times; urine not passed involuntarily; all albumin disappeared from it.

April 4th. Bowels moved eight times; wound appeared to have united, except where drainage-tube entered; but the latter had a distinctly sour smell when removed; skin of stump blistered by the wet sal alembroth, which was applied.

April 6th. Bowels opened five times; appetite good; patient cheerful; wound appeared quite healthy, and as if quite firmly united at edges. Owing to the continued diarrhœa all mercurial dressing was omitted, and salicylate wool used instead.

April 10th. Owing to some discharge on the dressings they were removed, when a gush of dirty puriform fluid escaped, but it was not offensive in odor; the edges of the wound fell apart, and then masses of dead connective tissue escaped, so that the wound looked to be quite cleared out, and the long upper flap of skin fell loosely over the end of the bone. The sloughing seemed to start from the place where the gelatinous infiltration had been noticed at the time of the operation.

April 11th. Sloughs all clearing out; skin not implicated from this date; the wound began to heal by granulation, and the man has made a good recovery.

Remarks.—In this case there was the history of the inflamed corn, then the sudden accession of severe constitutional symptoms rapidly becoming adynamic and typhoid. A patch of gangrene at once formed, which spread up the connective tissues on the outer aspect of the leg, giving rise to the feeling of emphysema, and the skin only became affected quite secondarily. It all commenced on March 24th; on the 27th he came to hospital; on April 1st it had spread so high in the leg as to necessitate amputation in the thigh, when infiltration was seen to have extended to the posterior flap. After this the stump seemed to progress most satisfactorily, but the man showed signs of septic poisoning by the profuse sweat, vomiting, subnormal temperatures, diarrhœa, subsultus, picking of the bedclothes, drowsiness, and blunting of the mental faculties, and passing urine involuntarily; but as he rid himself of the ptomaines, he improved. Then came the breaking down of the newly formed tissue in the wound. The urine became free from albumin, and never contained any trace of sugar or of mercury. No line of demarcation could be expected in such a case. The disease is referred to in the *Report on the Pathology of the Diseases of the Army in the East*, 1856, by Dr. Lyons, and also by modern surgical writers.

An examination of the leg was made by Dr. McGill, Assistant Professor of

Pathology. Nearly the whole dorsum of the foot was in a state of moist gangrene; parts of the soft tissues over the metatarsal bones had separated, but there was no line of demarcation. The whole of the outer side of the leg was tense and swollen, and presented bullæ on its surface. Pressure caused pitting and a feeling of deep crackling. Incisions gave vent to most foul-smelling pus; many parts of the muscular and subcutaneous tissues were yellow and jelly-like. The pus was evidently fast spreading up between the planes of muscles, regularly dissecting them from each other, and the jelly-like infiltrations extended as high as the external condyle of femur; the pus was also advancing along the deep planes of muscles. Inoculation of test-tubes containing 5 per cent. of sterile nutrient gelatine disclosed the presence in the pus of two distinct species of micro-organisms, namely, *a*, streptococcus pyogenes; *b*, staphylococcus pyogenes albus—*a*, being seen microscopically to exist as single cocci and also in chains; *b*, as single cocci and zooglœa form masses.

Some Observations on Bow-Leg and In-Knee, with Especial Reference to the Question of Outgrowth of these Deformities.

Royal Whitman, M. D., Orthopedic Surgeon to the Boston Dispensary, reports the following observations in the *Med. Record*, July 30, 1887:

A large proportion of the cases seen at an orthopedic clinic are deformities of the lower extremity (bow-legs and in-knees). Any radical treatment in such cases is especially difficult, because of the firmly-held belief among parents that these deformities are outgrown, and even the application of apparatus is objected to or delayed until such treatment is ineffectual. Family physicians usually advise delay, and that authorities differ may be seen by the following brief extracts from three of the many writers on this subject:

"When rachitis has disappeared such amount of curvature may remain as to require treatment. In the great majority of cases this is unnecessary, since, as has already been stated, the curvatures spontaneously disappear with the growth of the skeleton. Only in the leg, curvatures sometimes remain so that the foot is distorted, and only the inner or outer border can be placed on the floor. If this remain for years at the same point, an attempt may be made to straighten it."*

"The curvatures of rachitis often become less marked during growth, but many of them are so severe that they remain for life. These might have been benefited by timely interference."†

"Most of our best surgeons are of the opinion that the so-called *vis medicatrix naturæ* is sufficient to correct the deformed leg if sufficient time be allowed for it to regain the necessary strength, hardness, and ability to bear the weight placed upon it. This is a most dangerous error. No time, no natural process, is sufficient to bring a bent bone which, by a diminished quantity of lime-salts, has once lost its original elasticity, back to its normal position."‡

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*Billroth: Surg. Path. Tenth edition.

†O. Lannelongue: Nouv. Dict. de Méd. et de Chir., art. Rachitisme.

‡John Bishop, F. R. S., etc.: Unters. üb. d. Wesen u. d. Behandlung d. Deformitäten d. Menschl. Körpers.

It is evident that the only way this question of outgrowth could be conclusively settled would be by a series of observations on children suffering from these deformities, extending over the entire period of growth. Such observations have never, to my knowledge, been made, and how the authorities who believe in such outgrowth arrive at their conclusions is not stated. Meanwhile, is one justified in allowing the comparatively short time during which these bent bones can be easily replaced, to go by? I think not, as I shall endeavor to show.

In considering this subject, as to the advisability of treatment, I concluded to make some observations on the prevalence of bow-leg and in-knee among adults, thinking that by comparing such results with the supposed prevalence of such deformities in children, some general conclusions might be arrived at. Aggregations of adults on whom observations might be made, being presumably of a better or worse grade, it was finally decided that the opportunity which presented itself in the streets of Boston would be most satisfactory. This, of course, limited me to adult males, but as the deformities under consideration were more of cosmetic than of medical importance, this did not seem an objection.

These results are as follows:

Number of observations.	Number of adults observed.	Bow-legs.	In-knee.
1	25	6	2
2	25	4	1
3	30	6	1
4	13	1	2
5	65	9	2
6	27	5	.
7	37	9	.
8	23	5	.
9	27	6	.
10	68	12	2
11	34	6	.
12	52	8	2
13	21	3	1
14	28	6	.
15	20	4	.
16	51	8	.
17	58	13	1
18	24	3	1
19	14	4	.
20	92	19	2
21	60	9	1
22	57	11	.
23	92	13	2
24	57	20	1
25	94	18	.
26	78	21	.
27	48	8	1
28	45	8	2
29	150	30	1
30	70	17	.
31	65	11	1
32	143	28	2
33	87	25	1
34	136	21	2
35	47	16	.
36	37	7	1
Totals	2,000	400	32

Thus, according to these observations, the legs of one adult male in five, or twenty per cent., are curved to a greater or less degree, while only one in sixty-two, or .016 per cent., are affected with in-knee.

As to the relative frequency of these deformities in children, no very satisfactory statistics can be obtained. Most observations have been on the prevalence of rachitis, without regard to deformities, among children presented at hospitals for various diseases or injuries.

McNamara states it to be as high as thirty per cent. at hospitals, and believes it to be as frequent among children of the better classes, induced by the cold, damp climate of England.

Parry found twenty-eight per cent. of children at Philadelphia hospitals affected with rachitis.

Gee, thirty per cent. at London hospitals.

Ritter von Rittershain, thirty-one at the Prague Poliklinik.

Smith, among the children at the various institutions in New York over which he had supervision, found less than ten per cent. affected by rachitis.

I have no data from which to estimate the prevalence of rachitis and its resulting deformities in children, other than by general observation of children in the poorer quarters of the city and at the primary schools, but I am convinced that the proportion of these deformities among children will not exceed even if it equals it in adults.

It seems reasonable to suppose that in certain cases bow-leg may be an inherited peculiarity, and not the result of disease. Again, a certain proportion of these deformities are developed during adolescence, as shown by the well-known prevalence of in-knee among the bakers of Vienna, induced by the peculiar strain to which their knees are subjected, and very probably bow-legs may also result from certain laborious occupations.

In considering this question of outgrowth of rachitic deformities, it must be remembered that the upper and lower extremities stand in completely different relations. In the arms, their weight alone tends to rectify it, and the strains to which they are subjected also tend in the same direction; but the legs, already weakened by disease, have a constantly increasing weight to bear. It is very possible that the bones may so gain in strength that the deformity may not increase, and as the leg grows longer it becomes less marked. Still it must be remembered that the majority of children one is called upon to treat for such deformities are already from thirty to thirty-six inches in height, and that the curve in a well-marked case of bow-leg, even if lessened one-half, would still remain in the adult a noticeable deformity.

Thus, taking into consideration all possibilities and probabilities, the following will, I think, be considered fair propositions:

1. A bow-legged boy is more likely to become a bow-legged man than a boy with straight legs.

2. If such a proportion of bow-legs exists among adults as would appear by these observations, it would seem more reasonable to treat such cases in children, rather than to trust to nature for their rectification.

3. If these deformities are to be treated, the sooner treatment is applied the better.

At an orthopedic clinic children are rarely seen during the acute stage of rachitis. In my experience, those applying may be divided into three classes:

First, those who have evidently suffered from a severe form of the disease, with various irregular curvatures of the bones, which are thickened and deformed, usually with marked inequality between the upper and lower extremities, stunting of the growth, etc.

Second, children with no well-defined history of rachitis, tardy in development, showing slight general enlargement of the epiphyses, with curvatures principally in the lower extremities.

Third, large, active children with curvatures of the lower leg, with no history of rachitis, and, in many cases, no signs of the disease excepting the deformity.

The proportion of cases in these two latter classes is much greater than in the former, from which I infer that the children of Boston are subject to a milder form of the disease than often occurs elsewhere. The worst cases that I have seen have been among Italian and colored children, especially the latter. I have also noticed a greater proportion of deformities of the leg among adult negroes, though my observations have been too limited to be of any particular value.

In-knee, a much less frequent deformity, I have only considered incidentally. Why rachitis should in one child cause bow-legs and in another in-knee has never been satisfactorily explained. Possibly, in some cases, a weak child in attempting to stand aids itself by pressing the knees together, the feet being widely separated for a larger base of support. This position, combined with lax internal lateral ligaments, with possibly an exaggerated outward bending of the femur, might induce this deformity. It is a much more serious deformity than bow-leg, as interfering more with locomotion, and as tending to produce laxity of the ligaments at the ankle, with flat-foot, a condition often accompanied by more or less pain.

As to treatment, of course the general condition is of the first importance, but, as has already been stated, these cases are rarely seen until they have nearly or quite recovered from the original disease.

If a patient is seen early enough, mild forms of the deformity may be remedied by massage with daily bending of the bones, with possibly the application of splints at night, the child being restrained as much as possible from walking. In more advanced cases suitable apparatus may be applied. In moderately stiff bones I prefer the gradual forcible reposition under ether, with retention by plaster bandages. Often the bones crack during the operation, green-stick fractures being apparently produced. Apparatus, which may be applied at the end of a few weeks, is then simply retentive.

In stiff bones, where the external or anterior curves are low down, apparatus is in most cases useless, and osteoclasis or osteotomy should be performed, osteoclasis being safer when children are to be treated at their homes. In-knee can usually be remedied by apparatus; in more severe cases, where it is not considered advisable to perform osteotomy, the epiphyses of the femur may be partially separated and plaster bandages applied, to be replaced by suitable braces at the end of a few weeks.

A Case of Dissecting Aneurism About the Hip, Dependent Upon Rupture of the Internal Pudic Artery.

Dr. V. P. GIBNEY, in reporting this case, says: This case is certainly interesting, both to the general and to the orthopedic surgeon, and it seems to me unique. At all events, I am quite sure that it is exceedingly rare to find a tumor of this nature in orthopedic practice.

I have made no extended search through the literature of ruptured vessels, but have consulted the "Index Catalogue" without finding any direct reference to this subject.

Without anticipating the points, I will simply present the facts in connection with the case.

On March 24, 1887, I saw, in consultation with Dr. Charles Carroll Lee (to whom I am indebted for the privilege of presenting this case), a lad fifteen years of age, the object of the consultation being a question as to diagnosis. I learned on this date that the boy, a member of a large family whose history was good, had himself always been regarded as wiry and active, yet had been the subject of some anxiety for a year or more. In the early summer of 1886, on account of some indisposition, Dr. Lee gave him a thorough examination, finding a double valvular lesion of the heart. This was confirmed by Dr. Loomis, who was consulted at that time. It was concluded then that the heart lesion was probably congenital.

The boy spent the summer at a watering-place, and early in the fall he fell from a bicycle. Apart from a few bruises, nothing in the way of injury was found; indeed, he was just as active during the rest of the season, and throughout the winter, as he had ever been. There was no lameness whatever. He spent a part of the winter in Havana.

On March 1st, without any provocation, he began to walk a little stiffly, favoring the right limb. He continued to walk lame, and on March 7th, the day before the time appointed for return to his home, a play-fellow gave him a pretty sharp blow with his fist over the right hip, the one he had been favoring for the past week. The report from both the boy and his mother is, that a sharp pain was experienced as an immediate result of this blow, and that the lameness increased. He suffered much the same night. He suffered so much pain that the family determined to reach home as quickly as possible, and came by rail from Florida. There was some swelling about the hip on the day of their departure. Before he reached New York the suffering had become so great that it was with difficulty he could be moved about. Dr. Lee saw him on his arrival in the city, and discovered a little fulness about the hip, but it was not sufficiently circumscribed to attract special attention. The extent of the heart-murmur, and the probability of exposure to cold, especially at night, in the South, naturally suggested rheumatism, and it was thought best to keep him in bed. This was about March 12th.

One week later the swelling had increased so that fluctuation was discovered, and the possibility of an abscess suggested itself. His temperature varied from 100° to 102° in the afternoon. His appetite was capricious, and he began losing flesh. On March 23d, Dr. Lee introduced a hypodermic needle into the tumor, but failed to discover anything by this procedure.

On the occasion of our examination, on March 24th, we found an immense fulness extending from the crest of the ilium on the right side to the middle third of the thigh. The fulness was quite uniform, there was deep fluctuation, but the surface heat was not marked. There was no joint tenderness, no crepitation or grating within the joint, and the arc of motion, although small, was limited only by the amount of swelling about the hip—that is, there was no sign of reflex spasm produced by attempts at motion; the limb below the tumor was not smaller than its fellow. We introduced an aspirating needle in three or four different places, with negative results. The appearance of the tumor, the absence of pulsation or bruit, pain on movement of the hip, and the temperature curve, induced us to regard this as a case of acute subfascial abscess, or what we might term an acute suppurative periarthritis. It was decided to employ a longer needle at the next visit, and if it was found necessary, to lay the tumor open and treat antiseptically.

March 25th.—The tumor has increased perceptibly in size; the skin is quite tense. The boy has required morphia to secure rest, and his general condition changed for the better. With a long exploring needle an effort was made to discover the contents of the tumor. Several punctures are made on the outer side of the limb, without any result. Finally, the needle is inserted over the sacro-sciatic foramen, and after pushing the point in different directions, the barrel of the syringe finally fills with blood. The color is suggestive of arterial blood; yet, on removing the syringe from the needle, the blood flows with very slight force. The needle is removed, the bleeding soon ceases, and a compress is applied.

On March 30th, I saw the patient again with Dr. Lee, and the report was that the boy had suffered considerably since the 25th, and within the past day or two had referred the pain to the inner side of the knee and down toward the foot. His temperature has been a little higher than previously, reaching 103° on one or two occasions. The tumor has increased in size on the outer side of the thigh. About the middle is a small circumscribed tumor lying upon the original tumor. At this point there is distinct fluctuation. On exploration we find the blood darker than previously, and two or three ounces are removed by the syringe. Each of us takes a specimen for examination. We are fully convinced now that the tumor is dependent upon hemorrhage.

March 31st.—A microscopic examination reveals very little except blood. The blood-globules are somewhat crenated, but not specially degenerated. This is the report of our two separate examinations.

April 1st.—The question of operative interference has forced itself upon us; indeed, the former diagnosis of abscess has long since been given up.

Dr. E. L. Keyes is called in consultation this afternoon. The tension has increased since yesterday, the acumination is more pronounced, and there is some reddish discoloration over the surface. His temperature last night was 104°, and he is unquestionably losing flesh. Dr. Keyes makes his examination with a needle, finding darkish blood, the flocculency of which disappears after standing a while in the basin. In his opinion it was thought best to wait longer. He prefers not to make a diagnosis. He seems surprised at not finding pus. We all agree that there is nothing malignant about the tumor.

April 3d.—After consultation this afternoon, it is decided to make a small incision into the tumor, the parts being first cocainized. It is regarded as a hazardous procedure to use ether or chloroform, on account of the condition of the heart; but Dr. Lee attends personally to the anæsthetic, while Dr. Keyes makes the incision. The bistoury is thrust into the tumor on the outer side, and immediately thereafter a gush of blood follows. The opening soon fills with clots, and as these are removed the flow of blood continues. It becomes evident that a vessel is bleeding in the deepest portion of the tumor, and, under ether, a free crucial incision is made. The contents, consisting of blood-clots and blood, are quickly turned out, when the internal pudic artery is found bleeding. The work has to be performed so expeditiously that it is considered unsafe to spend much time in trying to pass a ligature about the artery. Two clamps are forthwith applied, and these are tied into position while the wound is packed with absorbent cotton. The whole operation does not last fifteen minutes; the patient rallies well. Morphia is administered to secure rest.

The operation was made at four o'clock. The pulse continued good all the evening; but between one and two o'clock the following morning the patient began to sink, and soon died of heart-failure. The dressings were removed soon after death, and the clamps were found securely in place, no secondary hemorrhage having occurred.

It will be seen, then, that this was no ordinary case. The record of the temperature shows a regular curve over which it ranged from 99½° to 104°. The etiology is exceedingly obscure. Whether the vessel was injured at the time of the blow on the hip, on *March 7th*, is somewhat doubtful; and yet, if the statement of the family and of the boy himself can be admitted in evidence, this certainly seems to have been the beginning of his tumor. Why he should begin to limp on *March 1st* and continue limping until the 7th, the day of the injury, is difficult to understand. The explanation seems to my mind this: The mere attack of subacute rheumatism would account for the lameness, and the blow of his playfellow might rupture the artery, as it lies very close to the bone at this point. The boy's muscle and adipose were not abundant in this locality.

Dr. Keyes writes me the following, for fear he may not be present this evening: "I can only say that at the time I saw the case it was a peculiar one in its clinical aspect—so manifestly tense, fluctuating, inflammatory, even œdematous at and near its obviously pointing spot. The absence of murmur and thrill, with the patient's pallor and fever and sweats, the negative testimony of the aspiratory punctures made before and after I saw the case, the very pronounced relief from inflammatory symptoms after my last puncture, and the fact that the fluid drawn at this puncture contained heaps and clumps and clusters of leucocytes—I think as many leucocytes as red cells—all this, and much of the circumstantial evidence, was so misleading that, although instructed now by the case, I do not feel that the failure to pronounce the tumor a dissecting aneurism at my or your early visits was at all peculiar. I have treated a traumatic aneurism of the gluteal artery in Bellevue Hospital successfully, cutting down boldly upon it, turning out clots, and with some difficulty ligating the vessel. I am not unfamiliar with dissecting aneurism, but I have not seen one behave as did the one in this case, nor have I before seen dissecting aneurism start from the internal pudic

artery. I have many times since our operation thought over this case, and I have on such occasions concluded that the course followed was the proper one. A more prolonged operation would certainly have left the patient dead on the couch—which I think he would have been in any case but for the exhibition of brandy by Dr. Lee, and the careful manner in which the doctor managed the ether. Had the boy rallied for a day, I think, starting with the knowledge furnished by the first operation, that the vessel might have been safely ligated with catgut, but I do not believe that such a course would have saved the boy's life. This is the way I look at the case, surgically speaking. Why the vessel gave way in a young boy in the first place, I find it difficult to understand. The local injury must have had something to do with it, but even this seems peculiar, as the pain went before the injury."

Dr. Shaffer, in some remarks, thought "that the case was one of unusual interest to the orthopedic surgeon, as, apart from its intrinsic interest, it furnished another subject for consideration in the differential diagnosis of hip-disease. He remarked that the high temperature, in connection with the existence of a fluctuating swelling, would ordinarily be almost conclusive of abscess. He agreed with Dr. Lee that the ruptured artery was probably atheromatous."

Dr. L. A. Sayre asked "whether the blood-clots removed at the operation had been carefully examined, as he thought, from a review of the symptoms, that pus would probably have been found. He remarked that, arguing from the standpoint of our present knowledge of the case, as furnished by the results, an earlier exploratory incision might have been justifiable, and possibly productive of good. He admired the moral courage of the gentlemen concerned in the management of the case, in going ahead and securing the vessel when there was such a temptation to defer operation and treat the case expectantly, rather than assume the responsibility of doing the only thing that could be done that offered any chance for the child's recovery; although by so doing they incurred the risk of being censured by the family and other ignorant persons for performing, in their judgment, an unnecessary operation."

It was difficult for me, as well as for the other gentlemen in the case, to regard this as anything more than a subfascial abscess, and even after the exploratory puncture it was difficult to reach the conclusion that finally pressed itself upon us. As Dr. Lee states, and as Dr. Keyes' remarks state, the whole course was unlike that of dissecting aneurism. I had no difficulty in excluding ostitis of the hip, or synovitis even, when I first saw the case. The signs, the symptoms, all pointed to a periarticular lesion.

I presented the above report to the Orthopedic Section of the New York Academy of Medicine on May 20, 1887, and I am permitted to make use of the discussion which followed on that occasion. Dr. C. C. Lee has, at my suggestion, written out his remarks, and they are as follows:

"As general surgeons, we are all interested in anomalies that lead to errors in diagnosis, and the difficulties that beset this case from the beginning were numerous and complicated. The diathesis of the patient, his antecedents of cardiac disease, his exposure to cold and chilly air before his attack, and the manner of its inception, all pointed to rheumatism. The rapid variations in temperature, the sweats, and increasing exhaustion that followed, soon compelled the

abandonment of this theory, and pointed to suppurative changes as the sequence of a periarthritis; while the entire absence of thrill, murmur, or pulsation in the tumor rendered the suspicion of aneurism (which was entertained and discussed at an early stage of the attendance) entirely doubtful.

"Our failure to obtain pus by the numerous aspirations was attributed to our inability to strike the correct spot with the exploring needle. Thus we remained in the dark, although employing every means within our reach, and no correct diagnosis was made until the exploratory punctures that led to the operation which preceded the patient's death.

"If in this we were culpable, we place the case on record in the hope that others may profit by our mistake.

"The cause of death, as has been correctly stated in the paper, seemed to be purely secondary shock from heart-failure; for the boy rallied from the immediate effects of the operation better than we had expected. His consciousness fully returned, he was rather cheerful, and conversed with some members of the family; he took small quantities of milk with Vichy and beef-tea, but when, seven or eight hours after the operation, he began to fail in strength, the heart-failure was extremely rapid.

"On all points narrated by Dr. Gibney, supplemented by Dr. Keyes, I find myself in accord, except one, viz., causation of the rupture of the artery. To me this seems very obvious.

"In nearly all such cases of cardiac disease in young subjects—double valvular disease with dilatation of the left heart (most of which are congenital), there is as distinct a tendency to fatty degeneration or atheroma of the arteries as occurs in cases of apoplexy. Granting that this obtained in our patient—which I suspected more than once from the wiry feeling of his radial artery, the rupture of a vessel which is suddenly forced against the unyielding neck of the femur by a sharp compressing blow would seem to need no elaborate explanation. The clinical history is in exact accord with this assumption."—*N. Y. Med. Rec.*, Aug. 27, 1887.

Operation for Empyema.

Dr. JAMES F. GOODHART says: It has been the common practice of surgery of the last few years to make a free incision in these cases, and this plan has been very generally adopted, I think, at Guy's Hospital, and certainly so both by Dr. Taylor and myself at the Evelina Hospital. A large-bore rubber drainage-tube is inserted and retained as long as may be necessary. I myself prefer that this tube should be shortened after a week or ten days, so that it is just long enough to pass in between the ribs, and no more. This allows for the continued patency of the opening into the pleura as long as may be necessary, and believing, as I do, that the idea of drainage being required from the very lowest part of the pleura is a mistaken one, I have been confirmed in this opinion by finding that, in the large majority of cases, this plan is successful. So far as I can make out, there have been forty-seven cases operated upon in the Evelina Hospital in the last five or six years, some under my own care, others under Dr. Taylor's, and to those I may add three others which have occurred to me elsewhere in the last few months, making a total of fifty; of these, forty-two have quite recovered, a sinus has remained in

three, and there have been five deaths. As regards these, however, it is only fair to say that one was due to suppurative pericarditis in addition to the empyema; another to the empyema being double; a third was due to a foreign body in the bronchus and septic pneumonia; a fourth was a huge collection, with a history of eighteen months' duration, and death occurred within a few days of the operation; and the last case had been operated upon, and was doing well, when the child caught measles and died from the effects of broncho-pneumonia. I do not think that in any one of the five was there any difficulty as regards the drainage from the simple incision, and none of them can be supposed to have any bearing upon the question whether or no excision of a portion of one or more ribs is advisable as a rule. In this series of cases a portion of rib has been excised three times; all three were under my own care. In two of them the operation was done when I was away for my holiday, and although several weeks had elapsed since the incision, I am not prepared to say that I might not have waited longer, and still with the hope of a good result. Nevertheless, to make the case as full as possible in favor of excision of the ribs, I will say that here were two cases in which simple incision was not satisfactory, and excision of a rib had to be practiced. One of them healed up and did well; the other, after several months, has still a sinus, and I propose to have still more of the ribs removed. In the third case, a small piece of one rib was removed at the first operation, because it was quite impossible to pass a tube into the chest of any size sufficient to ensure adequate drainage.

In the *Lancet* for 1886 (On the Surgical Treatment of Empyema, vol. i, 1886, p. 51), my friend Mr. Godlee, for whose surgical skill I have the highest possible respect—so much so, indeed, that I would almost rather distrust my own opinion than his in this matter—published a series of thirty cases of empyema in children, and in nineteen of them a piece of rib was removed. I suppose it will be allowed that any operation, if unnecessary, is harmful; and I feel further disposed to say that the resection of a rib in young children is an operation of some severity, do it with what ease you may, although it is not a proceeding that need be made much of, if it can be shown that any gain comes of it. Well, here is one observer who thinks it advisable to excise a piece of rib in two-thirds of his series of cases; another only about once in every fifteen cases.

I cannot think that there can have been such a difference between the two sets of cases; and I believe the difference of treatment is to be attributed to our starting on different bases. Mr. Godlee starts on this basis. He says, let us consider the manner in which a cure is effected under the circumstances of free incision into the chest (*Lancet*, 1886, vol. 1, p. 51). "The lung, unless it has previously become adherent to the chest-walls at some points, is lying at the back of the thoracic cavity, occupying the hollow formed by the angles of the ribs, and perhaps adherent also to the structures in the middle and posterior mediastina. The process which has to take place in order that the opening may close is a bringing together of the walls of the cavity and the surface of the lung. Now it is quite impossible for the lung to be distended by any inspiratory efforts; this would be opposed to the laws of physics, and no suction power is available as long as there is a free opening into the chest; yet somehow the closure of the cavity is brought about." Well, if physics decline to have my ex-

planation, I feel disposed to say, so much the worse for physics. Anyhow, I have seen a large empyema close up in eight days, which is an equal dilemma for the granulating-up-from-the-bottom and contractile-closure theories. Or, take a recent case that has happened to me: A little girl, aged eight years, has had an obscure chest mischief since early in January. She does not throw it off, has an evening rise of temperature, and her spine is beginning to curve. I find, on examination, the left side considerably retracted, the heart displaced a little to the right of the sternum. No absolute dullness anywhere, but tubular breathing at the apex under the clavicle, and a generally deficient movement of that side of the chest, and a very poor inspiratory murmur. A needle is put in at the angle of the scapula, and pus drawn; a free incision is then made, and four ounces of pus evacuated. A small piece of rib was excised in this case, because the ribs were so close together that no adequately large drainage-tube could be passed between them. There has been practically no discharge since; the temperature has averaged 99°, or under. The tube was removed on the ninth or tenth day, and the child appears to be well.

Cases such as these (and I have no doubt whatever there are some here who could match them) are by no means satisfactorily cleared up by an explanation of their course such as Mr. Godlee seems to me to sketch, but I venture to think such things are reasonably probable by the means I have indicated. It may indeed be said that the contraction of lymph goes on with extreme rapidity, so much, indeed, that it is difficult to fix limits to its capacity in this respect, and I should admit this if the contraction were free to act in all directions; but this is not so in the chest; the contractile force is materially limited by the ribs, can only act to any large extent when it has reduced the thoracic wall to the state of forced expiration by dragging on the lung and diaphragm. But then there is this other difficulty in that explanation. It is in just those cases which close up rapidly that the amount of lymph is smallest; therefore, in just those cases in which repair takes place most quickly and perfectly, the contractile force is most, and I think practically altogether, in abeyance.

I cannot pursue this matter further; I will only say in conclusion, that I never have a rib excised unless the case is an old standing one, or there is no room to put in a large drainage-tube; and, as a part of the outcome of the experience I have attempted to condense, I interfere with the pleura as little as possible, and for as short a time as possible. Therefore I never wash out the chest, and I attempt to do away with the drainage tube at the earliest possible period. A free incision is made in the chest wherever is most convenient, pus having been previously proved to exist at the selected spot by the exploring syringe. A large sized tube is put into the opening perhaps five or six inches long. This is shortened within a few days, and if all goes well after a week or ten days, the length may have been reduced to an inch or so, just enough in fact to go between the ribs, and no more. The external opening should be kept open long enough to insure that there is no re-collection going on inside. The last case I have had has been treated by a silver tube I had made on the principle I advocate, of keeping the external wound open and leaving the pleura alone. It is a flattened oval ⊂ an inch long, with a bore of four millimetres by twelve. It has a thin metal shield, which can be moulded somewhat to the side of the chest. It an-

swered admirably, keeping the ribs apart and giving a free vent, and this in a case not very favorable to success, for the child was only two years old. The case was operated upon by my colleague, Mr. Symonds; the tube was removed on the fifteenth day, the wound healed up forthwith, and the child has since then remained well.

In conclusion, let me say that I have not intended to make any objection to the removal of ribs in properly selected cases, and such I take to be very long-standing cases, or when, which according to our experience is I think not very common, the ribs come so close together that a properly large tube cannot be inserted, or is nipped between them. But it is my belief that in the present day resection of ribs is a common operation, and becoming yet more so; whereas I think it is quite unnecessary for the great majority of cases. This is the main point of my paper, and the one I hoped to see well discussed.—*Brit. Med. Jour.*, June 4, 1887.

Some Unsettled Points in the Pathology and Treatment of Syphilis.

C. R. Drysdale, M. D., M. R. C. P., Lond., F. R. C. S., in *Medical Press and Circular*, says:

Mr. Hutchinson, in his Lettsomian Lectures delivered last year and published in the *Medical Press*, wisely chose the difficult subject of syphilis, since even at this moment there are practitioners living who remember the days when gonorrhœa was treated by mercury to profuse salivation, on the principle that it had a common origin with syphilis, and until quite recently the topic of syphilis was scarcely ever introduced for discussion in medical societies. Mr. Hutchinson's abilities are so universally recognized that it would be bad taste for me to attempt to add to his reputation by any further praise. It is far more useful, I apprehend, to endeavor to point out the seeming difficulties in his convictions than to blindly attempt to follow his lead. It may, therefore, be permissible to observe that he is not in unison, in much that he says, with the best authorities on the subject of syphilis in London, Paris, or New York. For instance Mr. Hutchinson in his first lecture says: "If a person who has never before suffered contracts a venereal sore of any kind, it is highly probable that it will lead to syphilis," and approves of the statements of the late Dr. Morgan, of Dublin, that 50 patients out of 54 with first attack of venereal sores will have secondaries. His views, too, with regard to dualism, phagedæna, the complete prevention of secondary eruptions by treatment, the occurrence of scars on the penis or groins as an indication of syphilis, are by no means in accordance with the opinions of many practitioners of great experience. Mr. Hutchinson has long thought, he tell us, that unity or duality will cease to be a moot point. All inflammation products, he believes, are probably, under favorable conditions, contagious, and yet each may originate spontaneously. It is possible that the poison which produces the chancroid is, after all, only a specialized product of inflammation, and not a specific virus. Typical chancroids, indeed, last six weeks, but most "soft sores" are curable in a week with iodoform dressings. The true chancroid on the genitals, says Mr. Hutchinson, is seldom seen, except on those who have had syphilis already. He cites Dr. Morgan and Mr. H. Lee to show that sores not

distinguishable from chancroids are to be derived from the vaginal secretions of syphilitic women on the irritated hard sore. This fact has been distinctly denied by Mr. H. Lee, who says that such sores are *not* like those of chancroid; and my own experiments at the London Lock Hospital of the Rescue Society makes me very doubtful indeed as to the truth of the view which asserts that the vaginal secretions of syphilitic women are auto-inoculable save in the most exceptional cases. Over and over again I made the attempt to produce such sores by inoculating the patients themselves from the vaginal secretions of women with syphilis, and always failed; while success with the pus of chancroids is all but certain in my experience of such patients.

Mr. Hutchinson, indeed, seems to me to have of late been doing a good deal towards driving back the doctrines of syphilis into the period of confusion in which they were enveloped before 1852, when Bassereau wrote his work on syphilis. In common with Drs. Baulmer, Bumstead, and others, he thinks that chancroid is only a product of syphilis, or a non-special sore, which may be produced pretty frequently it seems, by inoculation of pus from acne, or other pustular diseases. Chancroid is to syphilis what the aborted vaccine vesicle is to vaccinia. In my opinion, none of these experimenters will ever be able to do with any other inflammatory pus what Puche did with the pus of chancroid. This physician put one drop of chancroidal pus into a wineglassful of water and dipped therein the point of a needle; with this he inoculated a patient, and a chancroid was the result. Tarnousky, in an essay on this question (*Jahresch. f. d. u. s.*, 1877), declares, as I have cited Mr. H. Lee as declaring, that the cases produced by Bidenkap, Morgan, Wigglesworth and others, are easy enough distinguished from the true chancroid, and that they are in most cases the result of the extreme irritability of the skin present in some syphilitic patients. In short, what distinguishes the germ of chancroid from that of an ordinary ulcerative inflammation is that the former is a virus which makes its reinoculation possible for an indefinite time.

There is not, on the other hand, one single fact to prove that chancroid is a modified syphilitic poison. Such sores never produce syphilis. In Lindmann's case, that physician produced 2700 ulcers on his own person, and yet this did not exhaust the power of re-inoculating himself. Meanwhile he inoculated himself with syphilitic mucus from the tonsils of a friend, and syphilis resulted. Danielssen, of Norway, produced chancroids on a patient with leprosy no less than 287 times, and then used the pus from a syphilitic sore, which produced syphilis. He then recommended chancroidal inoculations, which were then as powerful as before. When the late Professor Boeck, of Christiana, was in London, I had the opportunity of watching his experiments with the inoculation of chancroid, and then noticed that such inoculations could be carried on almost indefinitely in most of the young women of the Lock Hospital, while it was only the cachectic who were unable to nourish the virus, and in them it occasionally did succeed in not being reinoculated. For my part, I consider the idea of Mr. Hutchinson to be a mere hypothesis, and that the position of Bassereau and the "dualists" is the only tenable one, that syphilis is a disease of the blood and chancre its first manifestation, while chancroid, like scabies, is a purely local affection, and never associated with blood poisoning. Historically, too, it is amply

proved that syphilis was unknown in Europe before the arrival of Charles VIII. in Italy; while the description of Celsus seems clearly to point to chancroid and phagendena of the penis as having existed among the ancients. We know that in 1550 Brassavola confounded together gonorrhœa and chancre, and that John Hunter unfortunately did the same, because he happened unluckily to have inoculated himself with syphilis from an apparently ordinary case of gonorrhœa. Bell, Hernandez, and lastly Ricord, expelled gonorrhœa from the domain of syphilis, while they left chancroid in it, and it was only in 1852 that chancroid too was definitely expelled from this category. "Dualism," then, instead of being dead, as Mr. Hutchinson will have it, is the only tenable doctrine, and rational therapeutics must be based on this theory if they are to be of any value. Those who believe with Mr. Hutchinson and his followers that chancroid is a product of syphilis, ought, as I think, occasionally to administer some antidote against it, as they look upon mercury as an antidote which is wholly unnecessary. Those again who say that chancroid can be produced from ordinary inflammatory products must despair of ever stamping out this local contagion, in which they are, I believe, in error, as it might be extirpated and has nearly been so on several occasions in Paris by sanitary regulations (Maurice, "*Rarité du chancre mou*"). Gonorrhœa, finally, in the vast mass of cases, is entirely out of the domain of syphilis, and should be treated accordingly. All other doctrines, as I hold, are mysticism, and throw back the art of medicine instead of advancing it.

Another doctrine of Mr. Hutchinson is that phagedena is always a product of syphilis. But phagedena may attack any ulcer, whether chancroid, syphilitic, simple or scrofulous, and is, therefore, a peculiar quality of the individual. This is shown by the fact that a phagedenic ulcer will not produce phagedena by inoculation of another individual with its pus. Fournier's observations and the inoculations of Rollet and Sperino prove this. Let us, however, hear Mr. Hutchinson on this point:

"Syphilis in its present form often leads to phagedena, which is almost invariably of spontaneous origin, or caused by syphilitic inflammation and not by phagedenic contagion. Its existence puts an end to all sexual exposure, otherwise we should often see it on the genitals as a result of contagion."

It is still likely that many chancroids originate spontaneously, in the same sense that phagedena does. Mr. Hutchinson believes that hospital gangrene usually is derived from syphilitic cases. This I cannot see is in any way proved, since that disease is by no means common in lock hospitals.

The next assertion of Mr. Hutchinson in his Lettsomian Lectures seems also to me not based on experience. He says, "I have very seldom seen scars on the penis in patients who have not had syphilis, and still more rarely evidences of phagedenic action." This is by no means my own experience, and seeing that chancroids so frequently leave scars and are not syphilitic, I cannot understand how Mr. Hutchinson has found syphilis so continually in patients with such scars, unless, indeed, we suppose that persons who get one disease are certain or almost certain to get the other. He should also "regard scars on the groin as presumptive evidence of syphilis." Here, again, I cannot give my adhesion to the learned observer. Every one knows that in the mass of cases of syphilis there

is no suppuration of the inguinal glands, which remain slightly enlarged and gradually return to their normal size. But every one also knows, surely, that these glands are apt every now and then, say once in every four cases, to inflame and suppurate when there are chancroids on the penis, and to yield inoculable or common pus, thus leaving scars in the groin. How, then, can Mr. Hutchinson be justified in saying that cicatrices in the groin are a presumption of the patient's having had syphilis? Perhaps the key to this enigma may be found in the fact that Mr. Hutchinson speaks chiefly of private patients, for it is well known that chancroid is comparatively rarely seen in private patients, since such patients do not usually consort with women who are careless enough to have sexual intercourse while affected with such painful and easily noticeable lesions as chancroids are.

In 1839 M. Ricord said he had for the first time in his practice met with a case where syphilis had been seen twice in the same person, with an interval of nineteen years between the two attacks. Gascoyen, Fournier, Henry Lee and others, have published cases to prove that such second infections do occasionally take place. My own experience leads me to think that it is quite as rare for a patient to have two attacks of syphilis as it is for persons to have two attacks of smallpox, scarlet fever or measles during their life. The rule, *non bis in idem*, is as true in syphilis as it is in all virulent diseases.

The incubation of syphilis, according to Hutchinson, is seldom less than five weeks. My own cases show it is about four weeks from the date of infection until the first appearance of the hard sore. Chancres may occur in the same position, and this, in not a few cases I have seen, has been the origin of the idea that the patient has had a fresh attack of syphilis.

Mr. Hutchinson holds that syphilis may commence without any local lesion whatever. For instance, he says, it may arise by the infection of the male urethra with syphilitic discharges, which produces an apparent gonorrhœa in the male. In gonorrhœal syphilis the discharge is precisely like that of ordinary gonorrhœa, and he seems to think that perhaps urethral chancre may exist without pain and without discharge. If a patient with secondary syphilis contracts gonorrhœa, this may occasionally be contagious, but Tarnousky seems to have inoculated the pus of such cases no less than eighteen times on healthy persons, and had only one positive result. Mr. Hutchinson contests the value of the long received nomenclature of syphilis into primary, secondary and tertiary periods. Gummata, he says, are found in infants with secondary rashes, and, in the adult, periostitis, nervous and visceral affections are common in the eruption period. The gummata of the early period of syphilis, he remarks, are small and numerous, those of the latter fewer in number, or even single. He insists upon *rupia* being a symptom of the early period of syphilis, meaning by the term an eruption consisting of many distinct sores, which begin as bullæ and lead to the production of conical crusts. Such eruptions are usually symmetrical. This disease may ensue from over or under mercurial treatment, and indicates the use of mercury, not, as some say, potassium iodide, for its treatment.

He holds that it would be hardly too bold a generalization to say, that all the distinctly tertiary affections of the skin are of a lupoid character, *i. e.*, that all are serpiginous, unsymmetrically arranged, and leaving scars. This, he says, ex-

plains the causation of locomotor ataxia which is sometimes of specific origin. All the other diseases which are usually called tertiary often occur early; the brain is often attacked during the first year, and neuro-retinitis also occurs early, and deafness, and choroiditis disseminata; such diseases, too, he contends, would appear much earlier were it not that mercury is so much used. For my part I think that the merit of nomenclature is to assist therapeutics; and, as we know that iodine is useful almost solely in tertiary cases, I see no objection whatever to retaining that name, but rather an advantage. He is very definite on the point of treatment. Thus, he says, "it seems to be quite easy, if mercury be begun on account of the primary sore, and well antecedent to the appearance of any secondary symptoms, to entirely prevent the development of the latter. I have witnessed the precaution over and over again, and it appears to me to be the rule, rather than the exception, that no secondaries should appear." This statement has, I fear, not been corroborated by those who have made experiments with and without mercury. Syphilis, especially in young adults, is often such a very mild disease, that the secondary symptoms occasionally are merely a few mucous tubercles in the throat, and some enlargement of the post-cervical regions, etc.

Mr. Hutchinson has a theory, that tertiary symptoms stand to secondary ones in the relapses in most instances, *i. e.*, that they are a recrudescence of morbid processes in tissues damaged at a former period. This does not enable me to see why such lesions are so much benefited by compounds of iodine, and although Mr. Hutchinson lays justly great stress on local treatment of tertiaries, no one of experience can fail to attest the extreme value of the iodide in such ulcers and gummy tumors. "Arbitrarily," he says, "the secondary period ends with the second year, and about this time the disease ceases to be contagious or transmissible to offspring." All this is, doubtless, true in many cases; but palmar psoriasis may exist for ten years, and occasionally syphilis is transmissible to the offspring as long as this. Tertiary syphilis, he contends, is the "sequala" of secondary. If exposed to heat, a patient with old syphilis may get sun-stroke; if to mental distress, general paralysis; or, when the spinal cord is fatigued, may be attacked by locomotor ataxy. Many years ago, I published several cases of locomotor ataxy, which seemed to me to have arisen in syphilitic patients as a consequence of syphilis, and in this I quite agree with Fournier and Hutchinson.

Influence of Mercury as an Antidote.—In these days of uncertainty as to the value of remedies, when practitioners in Edinburgh treat all cases of syphilis without mercury, and even some surgeons in Paris do the same, whilst others give intermittent courses of the drug, only to meet the disapproval of those who give continuous courses of mercury for three or four years, it is interesting to find Mr. Hutchinson is so affirmative in his position as to the value of mercury as an antidote against syphilis. My own conviction is in unison with his, when he likens the value of mercury in syphilis to that of weak solutions of corrosive sublimate in warding off septicism in wounds. In former days, he says, when salivation was employed, the word "antidote" could not be used, because the drug was laid aside every now and then. When, however, grey powder, in doses of one grain, given from three to six times in the twenty-four hours, is employed

for six months, no secondaries will appear; or if already there, they will soon fade, and the patient will seem in excellent health. If, however, at the end of this time, he gives up the medicine, a mild outbreak of the disease will occur, probably within three months after it has been abandoned. This usually will appear in the form of an erythematous or lichenous eruption. This point I should be inclined to dispute, since erythematous syphilides are very rarely indeed seen so late in the disease as six months. Mr. Hutchinson asserts that, of late years, he has never seen a severe eruption develop itself after a mercurial course of the kind indicated has been commenced. Unfortunately, in Paris, where mercurial treatment has been almost universal, this has not been found to prevent severe secondary and tertiary eruptions in many cases, according to Diday, Julien, and other writers in France. Mr. Hutchinson admits that he has seen iritis, and neuro-retinitis, even when the disease has been well healed. But, as a rule, he maintains a six months' course of small doses of mercury and chalk can *cure* the disease. He is not so affirmative, however, about the prevention of tertiary disease by means of mercury, but, like Fournier, Mr. Hutchinson thinks that mercury exercises a very powerful effect in preventing such symptoms, and he thinks the diminishing severity of tertiary disease in modern times is due to this regulative treatment. Is it not rather due to the discovery of the powers of iodide of potassium? He thinks that mild syphilis, being often untreated, for this reason is more often followed by tertiary disease, and disapproves of the intermittent plan recommended by Fournier, because under such treatment rupia is apt to supervene. My own theory is that mercury is antidotal to syphilis, and should therefore be used continuously for some twelve months in very small doses (gr. 1–6 of hyd. iod. virid.) twice or thrice daily. "That syphilis is a bacterial disease," says Dr. Neissen (*Lancet*, May 29, 1886, p. 1039) "may now be generally accepted, the Lustgarten-Doutrelepoint discovery being a distinct advance; but the important question of the time and manner of the dissemination of the microbe from the seat of infection, cannot be determined by experiment, since it is not communicable to animals.

Inherited Syphilis.—Mr. Hutchinson believes that the inheritance of syphilis through the father is not only possible, but common. For my part I believe it is possible, but not common, as I have repeatedly seen gentlemen who had passed through syphilis, marry, and procreate perfectly healthy children. The really "moot" point in this matter is, whether a mother, as Kassowitz believes, can carry a fœtus in her uterus for nine months, and yet remain untouched. That I cannot accept, and Mr. Hutchinson seems to have the same opinion, as he accepts Colles' law. For my part, I think that women give syphilis to their infants with far greater frequency than men do. This is not the opinion of Mr. Hutchinson, however, who thinks that both parents are equal in this respect. Usually, one, two, or perhaps three children of a family suffer from syphilis, and then the younger ones are healthy. Mr. Hutchinson thinks that when a child inherits syphilis, it inherits all the disease; but it seems possible, from Pasteur's researches, that the virus of syphilis may become "mitigated" by time, until it can only slightly injure a fœtus, or only cause some single tertiary lesion, for which mitigated virus the antidote is iodine, not mercury.

The syphilitic rash of infants is transitory and entirely disappears before the year of birth is over. Children do not have syphilitic lupus, except in the rarest

cases, when the latter disease attacks the nose, and is curable by cautery and iodide of potassium. Multiple nodes on the long bones are common. None of the skin diseases of early life have been proved to be syphilitic in character, whether psoriasis, lichen or eczema.

Sarcocele and visceral disease are rare in infantile cases, and meningitis, neuritis, and disease of the cerebral vessels are also more uncommon among children than among adults. Thus, except in infancy, inherited disease rarely shortens life. Idiocy is not common in inherited syphilis, and syphilitic teeth are rarely seen in asylums for idiots. All these are " moot points " which Mr. Hutchinson is a master of, and which no other writer can with propriety dispute.

In short, my contention is that Mr. Hutchinson has of late years done a very great deal by his enormous powers of exposition and his unwearied and splendid teaching, to render the doctrines of syphilis, which were becoming well-defined and positive, again confused and ill-defined. Such being the case, I have deemed it my duty to protest against the doctrines with which I must disagree, whilst sharing with the whole medical world an unfeigned admiration for his genius and profound sagacity.

Inflammatory Stricture of the Male Urethra.

JOHN BLAKE WHITE, M. D., Visiting Physician to Charity Hospital, Consulting Surgeon House of Refuge, L. I., Fellow of the Academy of Medicine, etc., says:

A frequent cause of inflammatory stricture, as well as of other varieties of stricture, either as an independent affection or associated with congestion of the urethra, is the use of medicated bougies for the so-called cure of gonorrhœa. This method of treatment of urethritis frequently results in troublesome forms of inflammatory stricture, and also some of the most obstinate forms of permanent stricture met with in practice. Medicated bougies cannot be too strongly condemned in the treatment of gonorrhœa or gleet, especially such as are sufficiently charged with astringents to produce any appreciable effect. Acton* refers to caustic bougies as causes of retention of urine resulting from urethral inflammation, and I believe few, if any, authors entertain opinions in favor of adopting such remedial means. Druitt† very properly attributes inflammation to abuse of injections, or to exposure and interference during the acute stage of gonorrhœa. Erichsen‡ considers that chronic and long-continued inflammation of the urethra occasions congestive stricture by the swollen condition of the mucous membrane, which is transitory. The same author emphasizes lithiasis as a direct cause of inflammatory stricture. I have not observed any allusion by authorities to forced or voluntary retention of urine as a very probable factor in the causation of the form of stricture under consideration, although some cases of acute inflammation can be undoubtedly traced to this cause.

The treatment of congestive stricture is not by any means a simple matter, but on the contrary will seldom fail to test the judgment and skill of the medical attendant.

Every practical means for the immediate alleviation of the most distressing symptoms should be promptly carried out, without expecting to include in the plan of treatment remedial measures which may abort the affection.

That which generally causes the greatest amount of disturbance is the intense

* Urinary and Generative Organs. † Druitt; Modern Surgery.
‡ The Science and Art of Surgery.

inflammation associated sometimes with retention of urine. If these two conditions can be overcome within a reasonable time, many of the other symptoms which prove more or less a source of suffering will also be ameliorated. A warm sitz bath should be ordered and the patient directed to remain in it at least fifteen minutes. When retention of urine is a prominent symptom, the patient should attempt to urinate while in the bath, which he will succeed in accomplishing in a majority of instances. This means for the relief of retention should, therefore, be always tested before any attempt is made to introduce the catheter. The importance of this it is desirable to emphasize, because I believe that the bath sometimes fails to give relief when repeated efforts to pass the catheter have been previously made without success. The irritation thus excited tends to greatly aggravate the condition of spasm, which constitutes a complete barrier to the flow of urine or the introduction of any instrument. Sir Astley Cooper used to recommend general bleeding, but I have seen no case which failed to yield in time to less aggressive measures. The local abstraction of blood by one or two leeches applied to the perineum would better answer the purpose, and less danger from their use would be likely to follow. At this stage, a diuretic mixture containing the acetate of potassa, sweet spirits of nitre, and the spiritus mindererus, combined with a minute dose of tartar emetic, could be advantageously prescribed. I have found a combination of benzoate and salicylate of soda and fluid extract of belladonna, with the infusion of buchu or pareira brava, sometimes useful. Some of the natural diuretic waters, as the Buffalo Lithia, Clysmic or Underwood Spring waters, may be imbibed *ad libitum*. If the fever continues high after the above treatment, the patient should be placed in the recumbent position, kept free from all excitement, grains xv of antipyrin administered, and the dose repeated in two or three hours if the fever persists. For the relief of pain, a rectal suppository, consisting of pulverized opium, grains ii–iii, and extract of belladonna, grains $\frac{1}{8}$–$\frac{1}{6}$, or Dover's powder, grains xv–xx, internally, may be given. The hypodermic administration of morphia and atropia combined has acted very satisfactorily in some cases, seldom failing to give prompt and permanent relief from suffering. In retention of urine from urethral inflammation no attempt should be made to pass a catheter for at least twelve hours; in the meantime, the measures already recommended should be faithfully tried. The sitz bath, as warm as can be comfortably borne, should be repeated every hour, and an attempt to urinate while in the bath should be made each time. I do not advise straining or violent efforts at urination, but merely to favor, with a natural endeavor to expel urine, the relaxation of spasm superinduced by the influence of a warm bath or warm douche directed to the hips and abdomen. Micturation under these circumstances is often accomplished without any effort and without pain. If this method proves successful, the use of the warm sitz bath is advisable whenever urination is necessary, until there is a decided subsidence of the urethral congestion and a natural condition of the urinary apparatus once more re-established. I recall many instances where patients have readily and without pain urinated in the warm baths, or by the aid of a warm douche, as described, when attempts had been previously made, without success, to introduce a very small catheter. Occasionally, it will be found necessary to catheterize a patient, under which circumstances an instrument should be selected about one-half the size determined by Dr. Otis's pro-

portionate relation between the penile circumference and the urethra. No remedy in such cases has proved so eminently satisfactory in facilitating the introduction of the catheter as cocaine. Ten or fifteen minims of a four per cent. solution injected into the urethra through a long urethral nozzle attached to a hypodermic syringe, and retained for ten or more minutes, will suffice to render the urethra insensitive. Dr. Otis has made and uses a silver urethral staff with several small perforations at the extremity for the escape of the cocaine solution, and is thereby enabled to inject the urethra beyond the bulbo-membranous junction if desirable. As spasm is usually present at this very point, the advantage of getting some of the cocaine solution beyond it is apparent. For injecting the cocaine solution to any part of the penile urethra, I have had made by Tiemann & Co., and have been in the habit of using, a hard rubber nozzle with a small bulbous extremity, which is perforated so as to emit the solution in spray form downwards, upwards and outwards. The cocaine solution, besides rendering the urethra insensible to the introduction of instruments, serves the additional purposes of preventing or overcoming spasm and exerting an antiphlogistic effect upon the inflamed mucous membrane of the canal. This procedure, adopted and carefully executed in the most acute stages of urethral inflammation, will seldom fail to relieve spasm or pain when present, and, by exercising its antiphlogistic effect locally, the act of urination may be sometimes promoted without resorting to surgical measures for the relief of retention. The value of etherization in these cases should not be overlooked when the measures for controlling spasm already proposed prove unavailing. Purgation in the acute stage of urethral inflammation is contra-indicated, as it would tend to aggravate rather than ameliorate pain by increasing turgescence of the vessels of the pelvis. Authors have referred to the hemorrhage which at times follows catheterization as a result of the highly congested state of the mucous membrane, which should serve to suggest great care in all cases requiring instrumental interference. If, after a patient endeavors to relieve retention by the warm bath and douche and the use of a catheter, success is not attained, it will be necessary to aspirate the bladder. The operation can be performed either through the rectum or by penetrating the bladder in the supra-pubic region. When the acute stage of congestion of the urethra has been safely bridged, which can be generally accomplished by the plan of treatment already detailed, some mercurial laxative is clearly indicated, either in the form of Plummer's pill, or, better still, a combination of the resin of podophyllin, pil. hydrargyrum, extract taraxacum, and extract hyoscyamus in appropriate doses. It is rarely necessary to pass sounds even after the acute symptoms have subsided, but when such instrumentation seems expedient the greatest delicacy of manipulation is required. As a general rule, the use of sounds soon after the inflammation has abated is not advisable, whatever indications may appear for such treatment; but I am convinced that much benefit can be obtained after sufficient time has elapsed for the urethra to be entirely rid of its inflamed condition. A full-sized steel sound, carefully introduced at regular intervals for two or three months, will prove advantageous in dissipating fibrinous deposits which result from acute congestion. In each instance cocaine should be used, as it lessens the probability of irritation or a return of the urethral congestion. The pressure of the sound in its slow descent along the urethra serves to excite absorption of exudative masses, resulting from inflammation; which, if allowed to remain, would in time become organized and lay the foundation for permanent strictures.—(*Journal of Cutaneous and Genito-Urinary Diseases, June, 1887.*)

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